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FRIDAY, OCTOBER 6, 1843.

GULSTONIAN LECTURES,

Delivered at the College of Physicians, February, 1843.

By George Budd, M.D. F.R.S.

Professor of Medicine in King's College, London.

Lecture I.

The subject I have chosen for the lectures which the College has done me the honour to require of me, is suppurative inflammation and abscess of the liver.

From the earliest ages of medicine, the diseases of the liver have attracted much attention, and occupied a large space in medical literature. Before the functions of the liver were clearly made out, or its intimate structure known, anatomists saw, in the large size of this organ, in its existence in animals differing widely in organization and habits, and in the obvious relation of its secretion to the process of digestion, sufficient evidence of its vast importance in the living economy, and of the serious consequences that must result from derangement of its functions.

This evidence has been greatly enhanced and extended by the more explicit results of modern inquiry. Guided by the truth, of comparatively recent discovery, that a gland may be regarded as essentially consisting of a net-work of capillaries investing a secretory duct, anatomists have discovered a liver in the form of cœcal tubes, opening into the intestinal canal, in the very lowest animals, and have thus furnished the highest testimony that can be given to the importance of an organ: namely, its all but universal presence throughout the animal kingdom.

Chemists, on the other hand, in showing the fundamental relation of bile to the process of respiration, have done much to explain why the liver should be so essential a part of the animal economy, and have proved the great consequence of a more or less complete discharge of its functions to the maintenance of life.

But notwithstanding these motives for attaching new interest to the subject, while the press has been teeming with treatises on the diseases of the chest, of the kidney, and of the stomach, comparatively few have appeared, of late years, on diseases of the liver. This, assuredly, is not owing to any falling off in our sense of their importance, but to the unsatisfactory state of our knowledge respecting them. The precision lately given to our knowledge in other departments of pathology by the introduction of new methods of research, has created a demand for information more definite and exact than pathologists have been able to supply on diseases of the liver.

The unsatisfactory state of our knowledge of these diseases will scarcely be wondered at if we reflect that many causes have conspired to render the study of them peculiarly difficult.

The first, perhaps, in importance is, that the colour and texture of the liver are such as to make it difficult, with the imperfect means of research hitherto employed, to detect in the dead body the various effects of disease, unless where this has gone on to disorganization, or complete change of structure.

In an organ whose texture is spongy, as the lung, disease produces such striking changes that we can at once distinguish their different forms, and thus learn to associate them with the symptoms observed during life; but in organs naturally solid, and also nearly of the colour of the blood, as the liver and the kidney, these changes, and especially the traces of the various kinds of congestion and inflammation, are far less obvious, and to detect and discriminate them requires a knowledge of intimate structure which has only lately been obtained, and even with that knowledge a very close and minute inspection.

In the case of the kidney, the impediment which these conditions offer to the morbid anatomist is well illustrated by the fact, that a disease so common and so fatal as granular degeneration of this organ, and signalized during life by symptoms so striking as general dropsy and albuminous urine, has been left to immortalize, by its discovery, the name of a living physician; and that even now, notwithstanding the interest it has excited for fifteen years, and the attention given to it by the best anatomists of this and other countries, the real nature of the morbid change in which it essentially consists, is, perhaps, still undetermined.

Another circumstance unfavourable to the study of diseases of the liver is, that we can obtain but little direct evidence of its physical condition during life.

When the *lungs* are the seat of disease, we may ascertain, by the evidence of our senses, if any portion of them near the surface contain the natural quantity of air, or if this, in whole or in part, be displaced by some denser matter; if the surface of the pleura be roughened by fibrine, or its sac distended by fluid; if the bronchial tubes be free, or more or less choked by secretions.

If the *heart* be the organ affected, we may not only trace its outline and estimate the strength of its ventricles, but, by the sense of hearing, penetrate its interior, and ascertain the condition of its valves. Its whole physical structure is, as it were, laid open to us.

We may, indeed, examine the liver by *touch* and by *percussion*, but we cannot by these means penetrate its surface, and discover changes in its texture and consistence. They only enable us, in some cases, to trace its outline, and form a tolerable estimate of its bulk. This, indeed, is valuable information, and more than we can obtain by similar means with respect to the kidneys. But in investigating the diseases of the latter, we have the more than counterbalancing advantage, that, day by day, we can measure the quantity, and ascertain the composition, of the urine secreted: that is, we can tell precisely the manner in which their functions are performed.

The secretions of the liver, on the contrary, cannot be collected and analysed during the life-time of the patient; indeed, until lately, they could scarcely be analysed at all, as the chemists of greatest repute were not even agreed as to what are the normal constituents of bile.

For the diagnosis of diseases of the liver, practitioners had, thus, little more to guide them than the signs of functional disturbance;—signs in all cases of doubtful import, and here, if we except that of jaundice, more than commonly obscure and insignificant. We cannot, then, feel surprised that our knowledge of those diseases should be more imperfect—our diagnosis of them less sure, and our treatment consequently more tentative and empirical—than of the diseases of any other organ of equal importance.

That such is the case is frankly confessed even by those who have made them the especial object of their study. Annesley, in his splendid work on the Diseases of India, published, as he tells us, after twenty-five years' practice, in which he had the most favourable opportunities of acquiring experience in almost every part of India; and after having, during all this time, taken notes of the symptoms, progress, and treatment of the diseases which came under his notice, when speaking of acute inflammation of the liver, one of the most frequent of those diseases, says:—"It would obviously be a great attainment on the part of the practitioner, particularly in intertropical practice, to be able to ascertain the commencement of inflammatory action in the liver, and the precise part in which it is seated. The former is, on many occasions, a point of great difficulty; the latter frequently, if not generally, one of absolute impossibility. Indeed, it is not until after many years of varied and extensive experience of this disease, that the practitioner becomes enabled to decide, with any degree approaching certainty, respecting even the organ which is disordered in the earliest stages of the complaint; and even after all his observation and boasted tact, whether mental or manual, in the discovery of hepatic derangement, he will be obliged to confess the difficulty of the subject, and see cause for still further perseverance in the career of close observation which he has been pursuing."

Very recently two of the impediments to the study of diseases of the liver have been in some degree removed. By the researches of the chemists we have obtained more precise knowledge of the composition and uses of the bile; and by the labours of Kiernan and Bowman in this country, and of Müller and Henle in Germany, we have become acquainted with the intimate structure of the organ; so that now by our unaided sight, or by help of the microscope, we can distinguish the various changes of its texture produced by disease.

Hitherto, medicine, in this department, has waited on anatomy and physiology; but now that these have done their part—now that anatomy has laid open to us the structure of the liver, and physiological chemistry has pointed out the origin, composition, and uses of the bile—it is time that medicine should do hers, and give us more precise histories than we yet possess of the various diseases and derangements to which the organ or its function are subject.

As, in speaking of suppurative inflamma-

tion and abscess of the liver, I shall continually have to refer to some points of its anatomy only lately made out, I will commence with a short account of the structure of the organ.

Perhaps the best way of getting an idea of the structure of the liver, is to examine under the microscope—

1. A well-selected specimen, in which the portal and hepatic veins are thoroughly injected;

2. A recent specimen, in which the bloodvessels are empty, as in an animal killed by bleeding.

From the first specimen we may learn the distribution of the portal and hepatic veins, and the intermediate capillaries. Under one of the microscopes on the table is a thin slice of the liver of a rat, which I have selected from the numerous specimens of injected liver made by Mr. Bowman. The

FIG. 1.

P P P, twigs of the portal vein; *h*, a twig of the hepatic vein.

diagram now exhibited has been made from that specimen, and represents a section, in one plane, of a small branch of the hepatic vein, two or three small branches of the portal vein, and the intermediate capillaries. You see that the capillaries have nearly the same relation to the branches of the portal vein as they have to those of the hepatic. It is difficult from this section to tell which branch is portal, which hepatic.

From the trunks, both of the portal vein and of the hepatic vein, not only are large branches given off, which divide and subdivide into smaller ones, like the branches of a tree, but each branch is, as it were, hairy with capillaries, or small vessels that break up into capillaries, springing immediately from it, and forming a close and continuous network. If now you conceive similar sections to that exhibited in this diagram in other planes passing through the same branches of the vena porta and of the hepatic vein, you will perceive that the entire liver, abstracting the trunk and branches of the vena porta and of the hepatic vein, is made up of a dense plexus of capillary bloodvessels, continuous in every direction throughout the substance of the organ. These capillary vessels immediately minister to secretion. The vessels of larger size merely serve to convey the blood to, or remove it from, them. By the circumstance of the capillaries springing immediately from the trunks and branches of the portal and hepatic trees, and not from the ultimate twigs only, space is gained: that is, a larger mass of capillaries, the immediate agents of secretion, is packed in the same space.

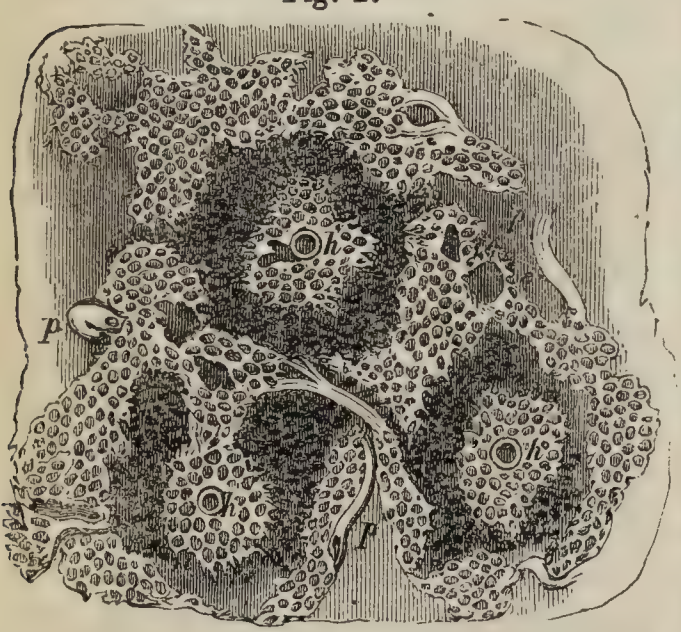
But, although the capillaries form a continuous network throughout the substance of the liver, we must not suppose that the same blood circulates through the entire network. The blood conveyed through any branch of the portal vein to a small mass of capillaries, having performed its part in secretion, becomes drained of the constituents of the bile, and passes out of the liver through an adjacent branch of the hepatic vein. In order, therefore, that the entire mass of capillaries constituting the liver may be duly and equally supplied with fresh portal, or biliary, blood, the whole mass must be divided by the branches and twigs of the portal vein, into smaller masses, each of which receives its portal blood from the branches and twigs which go to form it. And, in the same way, in order that the blood which has done its part in secretion may be at once carried off, the mass of the liver must be partitioned in a similar way by the branches and twigs of the hepatic vein, which will be intermediate to, or, as it were, dove-tailed with, the branches and twigs of the portal vein.

In consequence of this arrangement, if we cut into a liver in which, as is usual after death, the branches and twigs of the hepatic vein, and capillaries immediately terminating in them, are full of blood, while the branches and twigs of the portal vein, and the capillaries immediately springing from them, are empty of blood, the cut surface will be mapped out into small, tolerably equal, pentangular spaces, having the outline, formed by the portal twigs, pale, and the centre, into which a twig of the hepatic vein enters, red. These pentangular masses have been termed lobules of the liver. They have been described as isolated from each other, and each invested by a layer of cellular tissue, but Mr. Bowman has shown that this is not so, but that each lobule communicates by its capillary network with those around it. I shall have to refer to this circumstance when speaking of the morbid anatomy of abscess of the liver.

The real nature of the lobules, and the manner in which they are formed, is well

shown in the diagram No. 2, for which I am indebted to the assistance of Mr. Bowman. It represents, on a highly magnified scale, three lobules of the liver. Red size has been injected into the portal vein so as to fill its branches and twigs, and the capillaries immediately springing from them, but not to reach the branches and twigs of the hepatic vein. Blue size has been injected into the hepatic vein, so as merely to fill its branches and twigs, and the capillaries in immediate contiguity with them. The result is, that the lobules have a red outline and a blue centre.

Fig. 2.



p, twig of the portal vein; *h*, twig of the hepatic vein.

You see here, that the lobules are not distinct isolated bodies, but merely spaces mapped out by the ultimate twigs of the portal vein, and the injected capillaries in immediate contiguity with them. The twigs of the vein are, as it were, hairy, with capillaries springing immediately from them on every side, and forming a close and continuous network. The lobules appear distinct, isolated, bodies, only when seen by too low a power to clearly distinguish the capillaries. If this diagram were removed to such a distance that the capillaries could not be distinguished, the lobules would appear bounded by a uniform red line, and would have the aspect of distinct bodies.

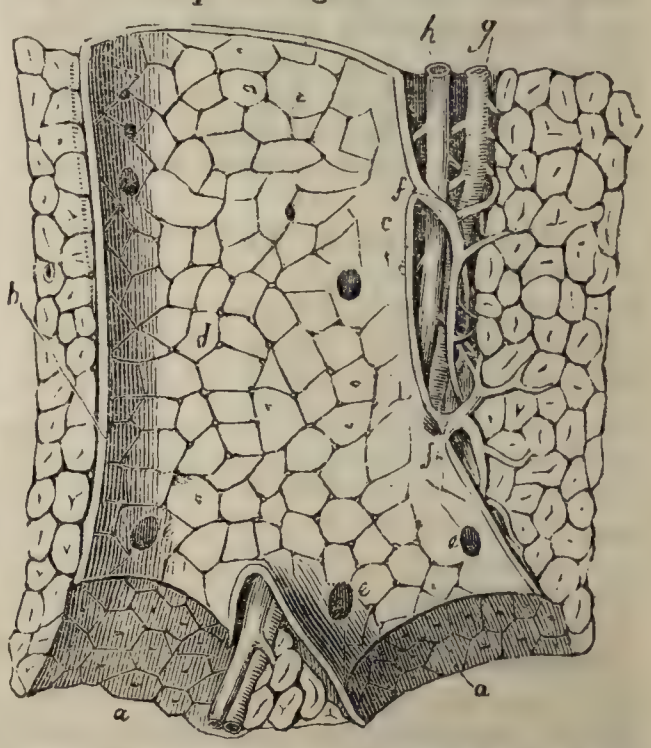
Since the capillary net-work of the liver has nearly the same relation to the branches and twigs of the hepatic vein, as to the branches and twigs of the portal vein, we might have anticipated that a similar appearance of lobules might be formed, the circumference of each being marked by twigs of the *hepatic* vein and the capillaries immediately surrounding them, and the *centre* by a twig of the *portal vein*. This appearance is seen in what has been called, by Mr. Kiernan, the second stage of hepatic venous congestion.

When the portal vessels are empty, and only the hepatic veins, and the capillaries in immediate contiguity with them, are filled with blood, there is an appearance of lobules, having a pale outline, formed by the ultimate twigs of the portal vein. The centres of the lobules appear as small, isolated, red spots.

If the injection extend from the twigs of the hepatic vein into the capillaries, but be not continued quite far enough to reach the twigs of the portal vein, all the capillaries of the liver will be injected, except those immediately springing from the portal twigs, and a section of the liver will present small, isolated, pale spots, where the uninjected twigs of the porta are divided. These spots being surrounded by a red band continuous throughout the liver, gives rise to an appearance of lobules just like those formed by injecting the twigs and capillaries of the vena porta, so as not to fill those of the hepatic vein.

I have said that the capillaries have the same relation to the branches and twigs of the hepatic vein as to those of the portal vein. This statement, however, requires some qualification. The branches of the portal vein are each accompanied to their smallest twigs by a branch of the hepatic artery, and one of the hepatic duct. These vessels, which are very much smaller than the corresponding portal vein, run up (as you see in this diagram copied from one of the plates appended to Mr. Kiernan's paper on the liver)

p Fig. 3.



p represents a longitudinal section of one of the portal veins; *h*, *g*, the accompanying branches of the hepatic artery and duct.

on one side of it, and of course, on that side the capillaries cannot spring immediately from the venous trunk; in other words, the lobules are not in immediate contact with the vein. The capillaries terminate in twigs, which go to the vein through the space which the presence of the artery and duct

necessarily interposes between the lobules and the vein.

This artery and duct are also liable to changes in volume, and, to allow of this, some cellular tissue is placed in the portal canals, surrounding the artery and duct, and continued in a thin layer round the branches of the portal vein itself. This layer separates by a small space the lobules from the branches of the porta, and is the reason of what you may notice in the first diagram, that the outline of the branches of the portal vein is somewhat more defined than that of the hepatic vein.

The hepatic veins are not accompanied by any other vessels, and are not surrounded by cellular tissue, and, in consequence, the capillaries can spring immediately from them on every side; they are every where in immediate contact with lobules.

To complete our conception of the vascular element of the liver, we must consider the hepatic artery. We have already seen that a branch of this artery accompanies each branch of the portal vein and hepatic duct.

It has been shown by Mr. Kiernan that the hepatic artery is distributed to, and nourishes, the ligaments of the liver, its capsule, and the coats of the portal and hepatic veins and of the gall-bladder and ducts; and that the blood conveyed to all these parts by the artery passes into veins which terminate in branches of the portal vein, and ministers to secretion, like blood returned from the other abdominal viscera. These veins, which originate in the liver, and feed the porta with the blood brought by the hepatic artery, constitute what Mr. Kiernan has called the *hepatic* origin of the portal vein.

I shall have again to refer to the distribution of the hepatic artery, when speaking of the causes of abscess of the liver.

Having obtained a conception of the *vascular* element of the liver, we must next consider the *secreting* element. This is perhaps best done by examining under the microscope a thin slice of the liver of an animal recently killed by bleeding.

In this specimen [exhibited on the table], the capillary vessels are empty of blood, and from the thinness and transparency of their coats, are scarcely visible; all that we see in looking through the microscope is a mass of nucleated cells, of a flattened spheroidal form, of a light brown colour, and almost transparent.

Fig. 4.

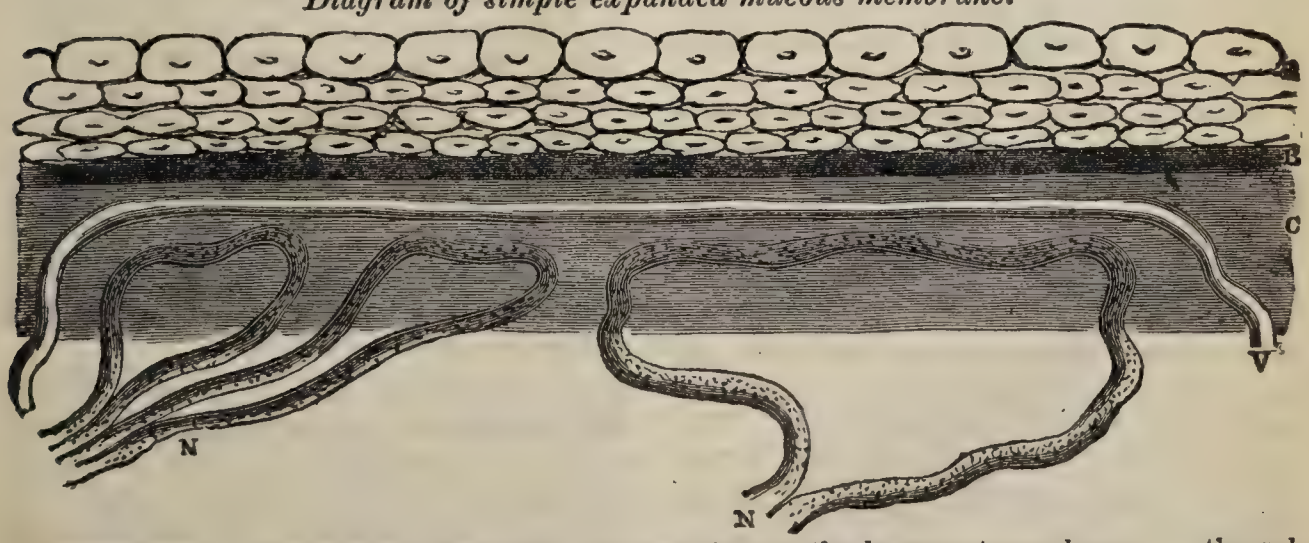
These nucleated cells are of different sizes, some much smaller than the rest, as if more recently formed, and not yet fully developed.

If while you are looking at this mass of nucleated cells, the capillaries, which can now be scarcely distinguished, could be filled with blood or coloured size, and rendered conspicuous, it would be seen that the whole secreting portion of the liver is a solid plexus of capillary blood-vessels, the meshes of which are filled with nucleated cells.

The mucous membrane of the gall-bladder

Fig. 5.

Diagram of simple expanded mucous membrane.



E represents the layer of nucleated cells; the dark line, B, the basement-membrane; C, the submucous cellular tissue, containing V, vessels, and N, nerves.

and ducts, like the excreting ducts of other glands—in fact, like all mucous membranes, and the skin itself—is composed, as Mr. Bowman has shown, of an extremely thin, transparent membrane, without pores or visible structure, whose external or secreting surface is coated with nucleated cells. These cells, by their opposition and union, form a kind of pavement on the transparent membrane, which serving as their basis of support, has for this reason been named by Mr. Bowman the *basement*-membrane. The blood-vessels and nerves ramify behind, or on the outer surface of the basement-membrane.

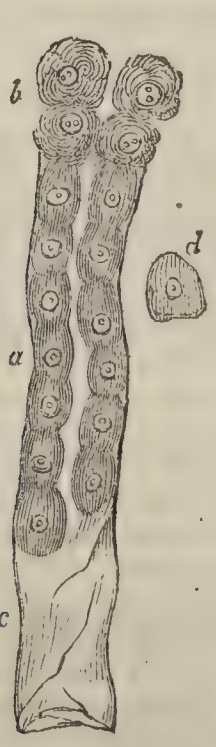
This arrangment is shown in this diagram, for which I am indebted to my friend Dr. Todd, and which is used by him in his lectures to illustrate the structure of mucous membrane. (See fig. 5.)

Although there is this general uniformity in the structure of the mucous membranes, they being all composed of a basement-membrane, *paved*, if I may so speak, with nucleated cells, yet the cells differ much in form and appearance in different situations.

In the tubule of the human kidneys, as you see in this diagram, the cells, like those of the secreting portion of the liver, are spheroidal.

Fig. 6.

Human Kidney Tubule, magnified 300 *diameters.*

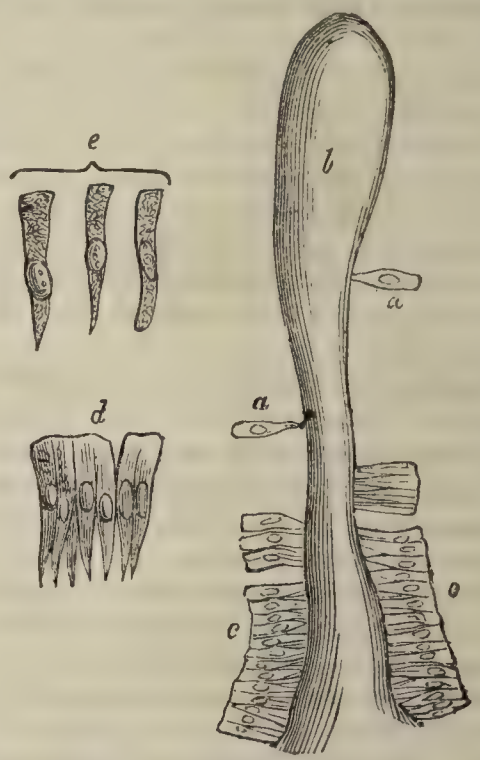


c, the basement membrane, from which the cells have been detached; *d*, a detached cell.

On one of the villi of the small intestine of a dog, represented in this diagram, for which, as well as the last, I am indebted to my friend Dr. Todd, the cells are of a prismatic form, or, as Dr. Todd has styled them, columnar.

Fig. 7.

Villus of the ileum of a dog, with the epithelium partly detached.



a a, *c c*, particles remaining attached; *d*, *e*, detached particles.

In the gall-bladder and large ducts the nucleated cells are of this prismatic form. There can be no doubt that these cells lining the gall-ducts are continuous with the nucleated cells in the meshes of the capillary net-work of the liver, but the basement-membrane cannot be traced beyond the ducts. Mr. Bowman says, that he has sought for it in vain in the lobules. These seem to be composed entirely of a dense plexus of capillary blood-vessels, the interstices of which are filled with nucleated cells.

Now the researches of Purkinje, Henle, Bowman, and Goodsir, leave no doubt that these nucleated cells are the immediate agents of secretion; that they assimilate, or, in other words, by their vital attractions, withdraw from the blood the peculiar principles of the secretion, which they subsequently discharge through the excreting ducts.

This applies not to the liver only, for it seems established as a general law—and it is certainly one of the highest and most interesting that the study of minute structure has yet disclosed—that all true secretion, whether in animals or in plants, is effected by the agency of cells; "that, however complex the structure of the secreting organ, these nucleated cells are its really operative part."

In the secreting glands of animals the nucleated cells withdraw from the blood and elaborate the peculiar principles of the secretions, and then, in one way or another, whether by rupture or disintegration, or some unknown mode, discharge them through the excreting ducts.

The evidence of this is, perhaps, clearer in the liver than in any other gland.

On examining the nucleated cells of the liver under a high power, we find that some of them enclose small spheroidal globules, which are recognised by their dark outline, or high refractive power, to be globules of oil or fat.

Fig. 8.

Fig. 9.

Fig. 8. Nucleated particles from the healthy human liver. Fig. 9. The same from the liver affected with fatty degeneration. *a a*, nuclei; *b b*, nucleoli; *c c c*, fatty globules.

In ordinary livers these oil or fat globules are small and few in number; but in the fatty condition of the liver in phthisis, and in that induced by keeping animals exclusively on fatty substances, they are so large and numerous as to distend the cells to double their natural size, and consequently to cause a great increase in the volume of the liver.

From the high refracting power of oil globules, we have, then, ocular proof that fatty matters taken into the system in too great quantity pass from the blood into the nucleated cells of the liver. There can be no doubt that they pass, either bodily or more or less changed, from these cells into the excreting ducts; for it has been ascertained by Henle that the proportion of the fatty constituents of the bile varies with the number and size of the oil globules in the nucleated cells.

So that if we supply an animal with fatty matter in greater quantity than its system requires, we may see an unusual amount of oil globules in the nucleated cells of the liver; and, by chemical analysis, we may discover an unusual proportion of the fatty constituents of the bile. The proof is complete that the fatty matters pass from the blood into the nucleated cells of the liver, and thence into the excreting ducts.

Most of the peculiar principles of the bile are, like fat, composed of hydrogen and carbon, and are, no doubt, eliminated in the same way, namely, by passing from the blood into the nucleated cells, and, on the rupture or breaking down of these, becoming discharged through the excreting ducts, so as to form the matter of secretion.

Direct ocular proof has also been obtained that the colouring matters of the bile are contained in the nucleated cells. Henle, in his recent edition of Soemmering, describes the nucleated cells of the liver as appearing yellowish or yellowish-brown in direct light, and as probably containing the colouring matter of bile; and Mr. Gulliver seems to have recently found an unusual quantity of bile, or at least of its colouring matter, in the nucleated cells of the liver in two persons who died jaundiced. The biliary matter was, he says, collected chiefly round the nuclei, but was also scattered throughout the cells. In some cells it was in such quantity as to render them nearly opaque*. We can hardly have more convincing proof that, in the liver, these cells are the real agents of secretion.

The nucleated cells in the lobules of the liver are, no doubt, continuous with those in the ducts; but at present we have no accurate account of the mode of termination of the ducts, which cannot be traced into the lobules. Mr. Kiernan has indeed given a figure of what he calls the *lobular biliary plexus*, in which the bile-duct is continued into the lobule, forming there a plexus which interlaces the plexus of capillary vessels. But he means the figure to be a diagram only: he confesses that no such view of the ducts can be obtained.

I have already alluded to the cellular tissue of the liver. This, which serves to protect the essential elements of the organ, is, in man, spread in a dense layer over its surface, forming the proper capsule of the liver, and is continued into its interior in the portal canals. It is in greatest quantity on that side of the portal vein on which the duct and artery run, but a thin layer of it completely invests the branches—at least all the considerable branches—of the vein. It cannot be traced further than the ultimate twigs of the artery and duct, and does not seem to enter the capillary net-work.

To make up the rest of the organ there remain the nerves and the deep-seated lymphatics. These accompany the arteries and ducts in the portal canals, but little is known of their distribution. They have not been traced beyond the portal canals.

A knowledge of the structure of the liver enables us to explain the various shades of

* This statement, and the quotation above, are taken from an admirable essay "On the Origin and Functions of Cells," by Dr. W. Carpenter, published in the 29th number of the British and Foreign Medical Review.

colour of which it is susceptible, and which have so taxed the descriptive powers of morbid anatomists.

The mass of the organ is, as we have seen, made up of a plexus of capillary blood-vessels, the meshes of which are filled with nucleated cells, containing the peculiar principles of the biliary secretion.

As regards the vascular element, the colour will vary from pale to a deep venous red, according to the empty or congested state of the capillaries. As regards the secreting element, it will vary from a light fawn to a deep olive, according to the quantity of fat globules, and of biliary colouring matter, which the cells contain. The actual tint of the liver is the combined effect of the tint due to the vascular and the secreting elements singly.

In effect of partial injection of the capillaries, the liver, after death, generally presents two colours—a yellowish colour, and a red—the former corresponding to the uninjected portion, the latter to the injected portion, of each lobule. This gave rise to the notion, which, until the researches of Mr. Kiernan, was universally prevalent, that there were two substances in the liver, a yellow substance and a red, which were supposed to constitute the medullary and cortical part of each lobule.

It was Mr. Kiernan who first showed conclusively, that the mottled appearance so frequently observed in the liver is owing to part only of its blood-vessels being full of blood; and that, in the great majority of cases in which it presents this appearance, the hepatic veins, and the capillaries that terminate in them, are the full vessels; the portal veins, and the capillaries that spring from them, the empty ones.

The fact, that the colour of the liver, when empty of blood, is uniform and yellowish, and that the red colour we often find mixed with it depends on vessels filled with blood, is not, however, a recent discovery. Although the contrary theory has been maintained by Bichat, Meckel, Andral, and, in fact, by most modern pathologists, the fact was distinctly stated, and ingeniously proved, nearly two centuries ago, by Glisson, in his celebrated work on the anatomy of the liver.

In the chapter in which he discusses the question, whether it be the office of the liver to make blood, Glisson says,—"From this it appears, likewise, that the native colour of the liver is not red, but rather a pale yellow; and when it afterwards becomes red, it is from the great quantity of blood that flows through it. In the chick, while yet in the egg, the liver is of this pale yellow colour, up to the last day of incubation, although it then begins somewhat to change. For some days, even after the chick is hatched, there are still the remains of this colour in the liver; but every day it becomes more and more tinged with the colour of blood."

This passage is interesting, not only in the history of opinion, but also as showing that Glisson saw how much the texture of our organs might be elucidated by a line of study which has been followed with so much success by modern anatomists—the study of their development.

I have quoted the passage, however, not on this account, but from its bearing on my present subject, and also because it would be unpardonable in me to lecture on diseases of the liver in this place, and not pay a passing tribute to the memory of Glisson.

What may be called the chemistry of the liver—that is, the chemical constitution of the bile, the purposes it serves, the source from which it is derived—is as necessary as a knowledge of the structure of the organ, and perhaps more necessary, to enable us to explain the various derangements of its function. But it has less direct bearing on the questions that will arise in considering suppurative inflammation; and for this reason, as well as for want of time, I shall for the present pass it by.

The inflammatory diseases of the liver are usually divided into *acute* and *chronic;* but this division is essentially faulty in practice, because the terms are applied, not with reference to the kind and degree of inflammation, but to the severity merely of the local symptoms. Now, inflammation of the liver running rapidly into abscess, if deep-seated and of small extent, may give rise to but few and obscure local symptoms, and would consequently be styled *chronic;* while inflammation involving the surface of the liver, even of such kind as terminates in the slow effusion of coagulable lymph only, will be attended with well-marked local symptoms, with great pain and tenderness, and will be termed *acute.*

We shall never have true histories of inflammatory diseases—histories to serve as safe guides for their treatment—until we have learned to arrange them, not according to their outward characters merely, or the prominence of particular symptoms, but according to the nature of the causes by which they are produced; for it is a truth that cannot be too strongly enforced, that it is the *cause* of an inflammatory affection which mainly determines its course and character, and the influence that remedies exercise over it. Take, for example, the inflammatory affections of the knee-joint.

If inflammation of the synovial membrane of the knee-joint be excited by a penetrating wound, and the consequent admission of air, it causes speedy suppuration, and generally leads to destruction of the joint. If it be

occasioned by the presence of pus in the blood, it is attended with very little effusion and swelling; but, as in the former case, it terminates in the formation of pus; and that so rapidly, and with such slight local symptoms, that pathologists have even inferred that the pus, instead of being formed by a process of inflammation in the joint, is actually deposited there, ready made, from the blood.

If the inflammation be excited by the peculiar cause of rheumatism, it is attended with severe pain, and often with much effusion; but this effusion is never purulent, and is almost always absorbed after some days, leaving the motions of the joint free, and its structure uninjured.

If the inflammation be gouty, it is attended with still more acute pain and larger effusion. But the effusion here is different in composition from the effusion in rheumatism; and when its aqueous part is absorbed, particles of lithate of soda are often left on the synovial membrane and in the cellular tissue about the joint. These perhaps, by mechanical irritation, occasion fresh attacks of inflammation, which lead to fresh deposits of lithate of soda, and at length the joint is completely crippled.

If the inflammation be excited by the specific poison of gonorrhœa, it is attended, like the inflammation of gout, with abundant effusion, distending the synovial capsule and causing great swelling. There is seldom much pain or fever, but the disease is often very obstinate, the swelling, in spite of all our treatment, continuing for weeks or months.

Thus we may have—to take the two last examples—to treat two cases of inflamed knee. The appearance of the joint is exactly alike in the two cases, and in both there is great swelling from effusion into the synovial capsule. We give colchicum in both: in one case the inflammation rapidly subsides under the remedy, and the effused fluid is quickly absorbed; in the other, the malady pursues its course as if nothing had been done. And why this difference? The parts affected are the same, and the changes, in outward appearance, exactly alike in the two cases. One might readily be mistaken for the other. The reason is simply this: the morbid changes are, in the one case, the effect of the specific principle of gout; in the other, that of the poison of gonorrhœa. I have here adduced a simple instance, but every department of pathology abounds in illustrations of the same truth, and leads to the conviction, that our judgment of an inflammatory affection can never be unerring, nor our treatment of it sure, unless we have ascertained the cause by which it was produced. It is, in great measure, our ignorance of the causes of diseases that renders the practice of medicine so uncertain.

At present, it would be premature to attempt to arrange the inflammatory diseases of the liver with reference solely to their causes; but, as the nature of the cause chiefly determines the character of the inflammation and its mode of termination, we obtain some approximation to such an arrangement by classifying them according to their effects.

I would therefore propose to arrange inflammatory diseases of the liver under the following heads:—

1. *Suppurative* inflammation, or that which leads to suppuration and abscess;
2. *Adhesive* inflammation, or inflammation which terminates in the effusion of coagulable lymph;
3. Inflammation of the gall-bladder and ducts;

And to consider, as far as the present state of our knowledge permits, the various causes that produce these different forms of inflammation, and the modification of each form according to the particular cause that excites it.

I shall devote the next lecture to a consideration of the causes that give rise to inflammation of the liver that terminates in suppuration and abscess.

PRACTICAL OBSERVATIONS, WITH ILLUSTRATIVE CASES, ON THE

THERAPEUTIC PROPERTIES OF SEVERAL MEDICINES.

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(For the London Medical Gazette.)

The leaves of a tree called *mattica*, *matico*, or *matèco*, growing wild in the interior of Peru, and described by Dr. Martius, in the Pharm. Central. Blatt. Jan. 1843, as a "*Phlomis*," but delineated in the "Flora Peruviana" as a *Piper angustifolium*, have long enjoyed considerable celebrity among the Indians for their styptic properties when applied to bleeding surfaces, as also for their aphrodisiac virtues when internally administered. In this country they have been applied externally by Dr. Munro*, and their styptic powers fully established; but I am not aware of their medicinal action, when inter-

* Provincial Medical Journal, June 18, 1843.

nally administered, having been ascertained; wherefore it has been my desire to give the plant that honest and impartial trial which its Peruvian reputation would invite and justify.

The leaves, the parts employed, are acuminated lanceolate, slightly crenate, deeply wrinkled, of a dark green colour on the upper, and a pale green on the lower surface. They vary from three to six inches long, and from a half to an inch or more wide. They are imported in packets of a somewhat spherical shape, having apparently been strongly compressed while moist, and subsequently highly dried, but evidently not roasted, as directed by the Peruvians for external use.

From these leaves I have had two preparations made; an infusion thus—

℞ Matticonis Foliorum unciam; Aquæ Destillatæ ferventis octarium. Macera per horas duas in vasi leviter clauso et cola;

and a tincture prepared thus—

℞ Matticonis Foliorum uncias duas cum semisse Spiritûs Tenuioris octarium. Macera per dies quatuordecim et cola.

These preparations have a pale green colour, faint aromatic odour, with a slightly astringent taste. They yield to the proto-chloride of tin, and subsequent treating with hydrosulphuric acid, a considerable quantity of tannin, and a substance not soluble in æther (*matticine?**) The dose of the infusion averages half an ounce to two ounces; as an injection it may be used *ad libitum;* of the tincture, one to three drachms as a dose.

Considering the astringent and slightly stimulant properties of these leaves might prove useful in diseases originating in or depending on a diminished tone of the superficial capillary vessels of the part involved in the malady, I have prescribed it in some forms of chronic diarrhœa, but with such variable and uncertain results as not to create very sanguine expectations from its use in such cases. In Case 1 it was undoubtedly eminently efficacious, whereas in Case 3 it proved inert; and in Case 4, though a slight amelioration of the symptoms, and diminution of the ailment, took place during its use, still there was not that benefit derived which would authorize us in supposing the mattico to be very effective in such diseases.

In leucorrhœa it has appeared to me to realize all the objects which Dr. Jewel would derive from the topical employment of the nitrate of silver injections, but with three superior advantages over that agent. It is more expeditious in the manifestation of its action, less variable in its operation, and more cleanly in its use. It is, however, of the last importance that proper attention be paid to its due administration, both with regard to the cases in which it is used, and the mode of its employment. In the acute form of leucorrhœa, for example, when the state of the mucous tissue affected is that of excitement approximating inflammation, where astringent and stimulant injections are contra-indicated, I should never propose the employment of the mattico. Indeed, it is, in my opinion, the injudicious use of such injections as those in cases of that description, which has produced those serious consequences described by Dr. Jewel and others as occasionally following their application, and which have excited in the minds of some practitioners unreasonable apprehensions regarding the employment of vaginal injections. In the chronic form of leucorrhœa, depending on a diminished tone and necessary congestion of the secernent capillaries of the mucous lining of the respective parts of the sexual apparatus whence the discharge proceeds, stimulating and astringent injections are generally found useful and effective. It is to cases of this description of leucorrhœa, whether uterine or vaginal, that I have limited my recommendation of the mattico; and by so doing, although it has been administered under many different circumstances, to individuals of very opposite temperaments, and of various diatheses, I have never witnessed any untoward symptom arise as a consequence of its employment. Cases 6, 7, and 8, shew the necessity of attending to the mode of its administration, and have led me, in hospital practice, to require its injection by the matron with an enema syringe. I have found it equally efficacious in menorrhagia as in leucorrhœa. Cases 11 and 12 will sufficiently exemplify its operation in

* Its chemical constitution I have not yet precisely ascertained.

this disease. Case 13 is an interesting illustration of its action in that description of varicose and ulcerated condition of the rectum, for which Dr. Houston * has proposed the topical application of nitric acid, of specific gravity 1500. In the case, however, of a child four years old, having prolapsus ani, with hæmorrhage at each defecation, its injection into the rectum, and application as a lavement to the protruded gut, was unattended by any benefit. In the case of gleet, it has, as Cases 14 and 15 shew, proved hitherto abortive; though, if I were confident of its proper employment, I should expect different results; at least its efficacy in such instances may be regarded as problematical.

Amongst the many diseases in which it seems to me that this remedy is worthy of judicious trial, may be enumerated hæmatemesis, hæmoptysis, dysentery, and certain kinds of hæmaturia. I have already, as Case 16 proves, unsuccessfully prescribed it in those sweatings which often, amongst factory people especially, precede and accelerate the sudden and rapid development of pulmonary phthisis.

Notwithstanding the high reputation which these leaves have acquired for their aphrodisiac properties, I have not, in the many instances in which I have now used it, observed the least manifestation of any such influence, nor of any emmenagogue operation.

Case I.—Ellen Hayhurst, 21 years old, of a sanguineo-choleric temperament, sickly look, and scrofulous diathesis, with strumous enlargements of the parotid glands, came under my treatment at the hospital on the 1st April, 1843, for diarrhœa, from which she had suffered for the last six months.

With as generous a diet as she could afford, abstaining from tea, coffee, and recent vegetables, she was directed to take two table-spoonfuls of the following mixture thrice a day:—

℞ Decoct. Aloes Comp. ℥iv.; Infusi Matticonis, ℥v.; Træ. Matticonis, ℥j.; Træ. Iodinii, ʒss. M. ut fiant mistura.

April 15th.—The bowel complaint gradually began to subside soon after taking the medicine, and entirely ceased about the fourth day. Her bowels are perfectly natural, and she has had no recurrence of the disease.

Case II.—Mary Harrison, æt. 37, of a very delicate haggard look, anæmiated aspect, and debilitated constitution, became my patient at the hospital on the 3d of April, 1843, in consequence of the effects of unduly prolonged lactation, of which diarrhœa and leucorrhœa were the most conspicuous symptoms. The child, which was nearly two years old, was ordered to be weaned, and stimulant chalybeate medicines prescribed. With these she persevered for nearly three weeks, with benefit to her general health, amelioration of the bowels, but no diminution of the vaginal discharge. She was then directed to have, in addition to her medicines, the following:

Infusi Matticonis unciæ quatuor per vaginam nocte maneque injiciendæ.

This treatment she continued for a week, when she ceased to have any discharge.

Case III.—Mary Sowerbutts, a tall athletic woman, 26 years of age, of a choleric temperament, debilitated by a long-continued diarrhœa, became my patient at the infirmary on the 26th May last. She had for twelve months past been subject to a relax, which affected her two or three times every morning, and at least once in an evening. A profuse leucorrhœa was also added to her other ailments.

Recommended, along with farinaceous food and good broths, instead of tea or coffee, an abstinence from malt liquors, and the use of one or two glasses of wine a day, to adopt the following medical treatment:—

℞ Infusi Matticonis, ℥vij.; Træ. Matticonis, ℥j.; Confectionis Aromaticæ, ʒij.; Acidi Hydrocyanici Diluti, ♏xl. M. capt. coch. ij. majora iterum tertioque de die.

Infusi Matticonis ℥iv. uterum omni mane injiciendæ.

On the 8th June the uterine discharge had totally disappeared, so that the injection was discontinued. The bowels, however, were no better.

June 15th.—There has been no return of the leucorrhœa. The diarrhœa, notwithstanding sixteen days' steady employment of the mixture, remained unmitigated, wherefore the mattico was displaced by other medicines.

* Dublin Medical Journal, March 1843.

Case IV.—T. H., Esq. a surgeon practising in Westmoreland, about 43 years of age; small, compact, athletic figure, healthy appearance, sanguineo-choleric temperament and active habits, consulted me on the 29th of December, 1842. For several years he had been afflicted with a chronic matutinal diarrhœa. The first thing every morning he had been obliged to go to stool, and the same call was repeated generally thrice in succession. During the remainder of the day he was free from such intestinal annoyance; and was in other respects perfectly well.

His teazing, but otherwise apparently unimportant complaint, had resisted the influence of opiates, alteratives, purgatives, and tonics. To a long-continued indulgence in bitters he had, indeed, attributed the state of his bowels.

A generous animal regimen, the substitution of a moderate quantity of brandy and water or port wine for malt liquors, and the subjoined medicines, constituted the course prescribed.

℞ Infusi Matticonis, ʒvij; Træ. Matticonis, ʒj.; Pulveris Rhei Usti, ʒiss.; Sodæ Sesquicarbonatis, ʒiis.; Confect. Aromaticæ, ʒiij. M. capiat coch. ij. majora quartâ quâque horâ.

℞ Fellis Bovis Inspissati, ʒss.; Pilulæ Hydrargyri, gr. xii.; Olei Carui. ♏v.; M. ut fiant massa in pilulas xii. distribuenda equibus; cum singulis dos. misturæ devoranda.

For three months he said that the course of treatment had been observed; but there was not that amount of improvement which such perseverance in its use would justify us in expecting. The monesia was therefore substituted, and with excellent effect.

Case V.—Jane Marshall, æt. 31, a tall, well formed, but unhealthy looking unmarried woman, of a choleric temperament, and remarkably hysterical disposition, labouring under amenorrhœa, came under my care on the 17th of April, 1843. She complained of great pain in the head, had ptosis of the left eye, and the tongue when protruded was slightly turned to the left side. Her appetite was bad, her bowels confined, and for the last week she had had morning sickness. She had not menstruated for three months; but this catamenial irregularity was a common occurrence with her, as also leucorrhœa, under which she was then suffering.

A plain nutritious regimen, regular exercise in the open air, and the following medicines, were prescribed:—

℞ Infusi Valerianæ, ʒviiss.; Træ. Valerianæ Amm. ʒss.; Acidi. Hydrocyanici Dil. ♏xl. M. capiat coch. ij. majora ternis horis in die.

℞ Pilulæ Hydrargyri; Extracti Colocynth. Comp., Extracti Hyoscyami, aa. 3ss.; Antimonii Potass. Tartr. gr. iss. M. ut fiant massa in pilulas xxiv. dividenda quarum, ij. omni nocte sumantur. Vesicatorium nuchæ admovendum Infusi Matticonis unciæ quatuor vaginam omni mane injiciendæ.

On the 27th April, she stated that after using the injection four or five days "the whites" entirely disappeared. She felt relieved also in her head, and much improved in general health. By subsequently continuing the antihysteric treatment, she escaped from her threatened paralytic affection.

Case VI.—Anne S——, a married woman, 26 years old, of a weakly form and attenuated appearance, melancholic temperament, and phthisical diathesis, was admitted under my care on the 1st of May, 1843. She supposed that her husband had communicated the syphilitic disease to her. Upon examination, however, she was found to be suffering from considerable leucorrhœa, and to have a simple bubo in each groin. For some time she had had indigestion, with constipated bowels, and indications of incipient prolapse of the womb.

The buboes were ordered to be fomented two or three times a day with hot water, rest was strictly enjoined, and the following treatment, with liberal diet, prescribed.

℞ Magnesiæ Sulphatis, ʒss.; Infusi Gentianæ Comp. ʒvij.; Træ. Gentianæ Comp. ʒj.; Acidi. Sulphur. Dil. ʒj.; Ferri Sulphatis, gr. viij. M. capiat coch. ij majora ter indies. Infusi Matticonis unciæ quatuor nocte maneque in vaginam injiciuntur.

On the 8th of May she reported herself as better; her bowels were regular, but somewhat griped; the bubo in the left groin was suppurating, and the leucorrhœa had entirely ceased soon after using the injection.

She was directed to discontinue the injections, and ordered some chalybeate tonic and aperient medicines.

18th. — Very much improved in general health, but the vaginal discharge had returned.

She continued the use of the injections for a fortnight without any abatement of the discharge. The matron directed to administer the injection with an enema syringe, so as thoroughly to wash the cavity of the uterus; after which she had no longer any discharge.

Case VII.—Agnes Varley, æt. 18, of a delicate form, sickly look, and anæmiated complexion, came under my care on the 15th of May, 1843. She is of a sanguine temperament, exceedingly scrofulous diathesis, has enlarged glands on each side of the neck, and is distorted by a posterio-lateral curvature of the spine; added to which she had a profuse leucorrhœa.

For two months she had been treated by iodine and iron, combined with generous regimen, with decided benefit to her constitutional health, but no amelioration of the vaginal excretion, wherefore she was directed to use three or four ounces of the infusion of mattico as an injection *per vaginam* night and morning. This course she pursued for a month without any obvious advantage; the matron was therefore directed to administer the injection so as effectually to wash out the vagina.

A week afterwards she stated that since the matron administered the injection she has had no discharge. At present she is under my care for her constitutional maladies, and says she has had no reappearance of the leucorrhœa.

Case VIII.—Agnes Howson, æt. 32, a delicately formed sickly looking woman, of a leucophlegmatic habit and scrofulous constitution, came under my care on the 29th of June, 1843. She presented all the corporeal evidences of impoverished diet, and long protracted lactation, of which leucorrhœa was one of the most distressing concomitants. The discharge she stated came from her in gushes while in bed, and the least exertion wrung it from her at any time.

A puny, unhealthy looking infant, of 22 months old, which she was suckling, was directed to be immediately weaned, and the patient to live well, being allowed a pint of ale or porter daily, to have the womb injected with the infusion of mattico, and to take the following mixture.

℞ Decocti Aloes Comp. Infusi Gentian. Comp. aa. ℥iiiss.; Træ. Gentianæ Comp. ℥v.; Træ. Cantharidis, Træ. Secalis Cornuti, aa. ℥iss.; Ammonio Tart. Ferri ℥j. M. ut ft. mistura, de qua capiat coch. ij. majora ter die.

July 20th.—After the injection the leucorrhœa gradually subsided, so that on the second day it entirely ceased, and has not since reappeared.

Case IX.—Sarah G——, an obese, strong looking woman, 58 years old, florid complexion, sanguineo-choleric temperament, applied to me at the hospital on the 13th of July, 1843, in consequence of her suspecting that her husband had given her gonorrhœa. For the last week she had had such a profuse discharge, that neither repeated washings, nor the constant application of cloths, could keep her clean. The labia and upper parts of the thighs were excoriated and inflamed, and she had scalding in making water; all which on inspection proved to be the effects of leucorrhœa.

To take no medicine, but to have the womb well injected by the matron with half a pint of the infusion of Mattico.

On the 5th of August, she stated that the single injection had completely cured her; and she has been quite comfortable, and free from discharge, ever since its administration.

Case X.—Elizabeth Bainbridge, æt. 28, a mother of three children, the youngest two years old, came under my care at the hospital on the 15th July, 1843, for chronic bronchitis; suffering at the same time from considerable uterine irritation and abundant leucorrhœa.

In addition to the treatment of the malady for which she applied, she was directed to inject four ounces of the infusion of mattico every morning into the uterus.

For a fortnight she observed the directions given, but found no amelioration of the discharge. The bronchitic symptoms having subsided, ferruginous tonics were prescribed, and the matron directed to inject the infusion of mattico into the uterus.

Since the day after the administration of the injection, when she was teazed with urticaria, she has had no reappearance of discharge.

Case XI.—Elizabeth Poppin, æt. 30, of a sanguine temperament, delicate look, emaciated appearance, and presenting the symptoms of enervation, the consequence of some continued or

excessive flux, became my patient on the 29th of April, 1843, for menorrhagia. She had had five children, the youngest being two years old, and for the last nine months she has been unceasingly afflicted with the present disease.

With a recommendation to use as generous a regimen as she could afford, the following mixture was prescribed.

℞ Infusi Matticonis, ℥vij.; Træ. Matticonis, ℥ss.; Træ. Secalis Cornuti, ʒij.; Træ. Valerianæ Amm. ℥ss. M. capiat coch. ij. majora ternis horis quotidie.

May 4th.—No improvement.

Mistura eadem repetatur. Per vaginam infusi Matticonis unciæ quatuor nocte maneque injiciendæ.

22d.—The discharge gradually diminished while using the injection, and for the last eleven days she has not "seen any thing." Discharged cured.

Case XII.—Ellen Moon, æt. 30, of a light, ruddy complexion, small delicate figure, sanguine temperament, and hysterical habit, suffering from menorrhagia, came under my care on the 24th of July, 1843. Her youngest child is four months old; since its birth she has been incessantly afflicted with her present complaint, and feels her mind and body much impaired by the continued drainage.

With a good diet, including half a pint of ale or porter daily, to observe the following prescriptions.

℞ Quinæ Disulphatis, gr. xii.; Ferri Sulphatis, gr. viij.; Zinci Sulphatis, gr. iv.; Aquæ Puræ, ℥viiss; Træ. Zingiberis, ℥ss.; Acidi Sulphurici Dil. ♏x. M. capiat coch. ij. majora ter de die. Uterum matronâ nosocomii infusi Matticonis unciæ sex instanter injiciendæ.

August 14th.—Discharged cured. She has had no uterine or vaginal discharge since the administration of the injection.

Case XIII.—On the 5th of January, 1843, I visited Mrs. R——, Cheetham Hill, near Manchester. She was upwards of 50 years of age, of a sanguine temperament, strumous constitution, small, delicate, juvenile-looking form, exsanguinated appearance, with an anxious and dispirited expression of countenance, and the physiognomic signs of continued physical suffering. When *enceinte* of her second child she took a quantity of sugar of lead in mistake for Epsom salts. The error was, however, quickly discovered, and antidotes were timeously and successfully administered. But from that period she dates the origin of her malady, which progressed with each succeeding pregnancy; so that for twenty years past she has been fruitlessly seeking benefit from our science. During the last two years she has had no evacuation of the bowels without the use of aperient medicines, and even with such aid defecation has always been attended by great tenesmus and severe bearing-down pains, "more like the cutting pangs of labour." Enduring this excruciating misery she has been compelled to remain from half to three quarters of an hour on each occasion on the *commode de nuit*. The fæces, which are generally white, and of a clayey appearance, are usually besmeared with a muco-purulent matter, but preceded by a quantity of black grumous blood, evidently the accumulation of effused blood in the rectum. Defecation always terminates in a prolapsed condition of the gut, so that she is necessitated to lie down until a spontaneous reduction occur, but more generally she is obliged by manual assistance to restore the parts. While sitting up, the prolapse usually recurs to such a degree that she is required to have her chair so arranged with cushions as to render the sitting posture even tolerable. The same descent of the gut attending every effort to walk has deprived her of that mode of exercise, and compelled her to take airings in a bath chair suitably constructed to accommodate the anal malady. An inspection immediately after defecation discovered the anus surrounded by a prolapsed, highly vascular, mulberry surfaced, bleeding membrane; an examination by the finger, per anum, detected an exceedingly tender, thickened lining of the rectum, with a varicose state of its vessels.

She was recommended to live almost entirely upon animal food, with bread or cabin biscuits, taking wine at luncheon, and cold gin and water at dinner and supper. The subscribed medicines were advised.

℞ Fellis Bovis Inspissati, ʒij.; Creasoti, ♏vj.; Pilulæ Hydrargyri, gr. xii.; Extracti Gentianæ, ʒj.; M. ut fiant

massa in pilulas xxxvi. dividenda, de quibus ij. nocte maneque sumendæ.

℞ Decocti Aloës Compos. ℥iiiss.; Infusi Gentianæ Comp. ℥vss.; Træ. Gentianæ Comp. ℥j.; Ammonio. Tartr. Ferri, ʒiss.; M. ut fiant mistura de qua capiat coch. ij. majora ter de die.

To the first of February she scrupulously observed the injunctions enjoined, when she felt better in general health, had less bleeding, and less pain during the evacuation of the bowels. In two days afterwards, however, she had another hæmorrhagic attack, which reduced her very much; the gut descended at each effort at defecation, with increased pain, and she suffered considerable irritation of the rectum after each reduction of the membrane.

A continuance of the same medicines and regimen, augmenting the quantity of wine in proportion to the sinking of the powers, was recommended; but in addition to have four ounces of the infusion of mattico injected night and morning into the rectum, and retained there as long as possible.

When I visited her on the 13th of February she was very remarkably improved. She had only found it necessary to use the injection five times, as the hæmorrhage had gradually diminished until five days ago, when it had entirely ceased. Her bowels were more naturally moved; the prolapse considerably less, and spontaneously reduced on lying down. She complained much of the pain experienced during and immediately after the use of the injection.

In usu Pilularum Misturæque perstet.

On the 26th February, she had a slight return of the hæmorrhage, which was at once arrested by a single application of the mattico infusion as an injection. She complained of an annoying irritation of the rectum, almost amounting to tenesmus, which I regarded as the effect of the aloes, but as that was originally prescribed for its specific action on the mucous lining of the rectum, I, instead of withdrawing it, preferred the recommendation of an occasional suppository composed of extract of opium and hyoscyamus, with soap.

March 2d.—Again visited Mrs. R—, whom I found perfectly convalescent. The suppositories had afforded the desired relief. Defecation, occurring every morning and evening, was accomplished without pain or bleeding; the membrane scarcely ever escaped, and when it did so, never suffered strangulation as it receded, even while she was standing. She had quite given up the use of the bath chair, and had been walking a mile or two daily.

Up to the present period she has had no recurrence of her malady, and is now in the enjoyment of perfect health.

Case XIV.—J. R. H——, Esq. of Smedley, near Manchester, consulted me on the 17th Aug. last for a gleet, the effect of a gonorrhœa which he had contracted a month previously. With the sulphate of magnesia and bitartrate of potassa as a laxative and diuretic, I advised the urethra to be injected morning and evening with the infusion of mattico. He assiduously, he said, but fruitlessly, followed my directions for eight days, when I substituted an injection of sulphate of zinc and sulphate of morphia, which had only need to be used thrice, when the discharge was stopped.

Case XV.—Mr. J. B—— had suffered from a gleet for three or four months. He had tried various injections, conjointly with the internal use of copaiva and cubebs, but without any benefit. He consulted me on the 1st ult. when I prescribed a brisk turpentine purge, and the injection of the urethra every night with the infusion of mattico. At the end of a week there was no improvement. The injections were discontinued, and the following mixture prescribed.

℞ Decoct. Scoparii Comp. ℥vij.: Træ. Capsici, Cantharidis, Secalis Cornuti, aa. ʒiiss. M. capiat. coch. ij. majora tertia quâque horâ.

In four days all appearance of gleet was dispelled.

Case XVI.—W. T——, a young man, 19 years of age, dark complexion, delicate form, unhealthy consumptive look, scrofulous diathesis, and melancholic temperament, consulted me on the 12th January last. He was suffering from those excessive sweats which often precede, usher in, and seemingly accelerate, the rapid development of pulmonary phthisis. He had no cough, though the stethoscope shewed that his lungs were studded with consolidated matter; his bowels were regular, and his appetite voracious.

Ordered to have his body sponged every morning with a cold infusion of mattico, and, with a plain good nutritious regimen, to take the subjoined mixture—

℞ Infusi Matticonis, ℥vij.; Træ. Matticonis, ℥j.; Quinæ Disulphatis, gr. xij.; Acidi Sulphur. Dil. ℥j.; M. capiat. coch. ij.; majora iterum tertioque de die.

In this treatment he unremittingly persevered for three weeks without any benefit; therefore other medicines were substituted.

[To be continued.]

TREATMENT OF GONORRHŒA.

To the Editor of the Medical Gazette.

SIR,

A LETTER published in your journal by Mr. Childs, of London, recommending the superficial cauterization of the urethra as a cure for gonorrhœa, has induced me to give publicity to the following case.

A young gentleman, aged 26, put himself under my care for syphilis, six months ago, which, in the usual time, was cured, when he directed my attention to his urethra. He had not passed his urine for some time with ease and comfort, the stream was much smaller than usual, &c., and, in short, he had all the symptoms of stricture of the urethra. I attempted to pass a moderate-sized bougie, but failed, it would not even enter the orifice; I tried each size in succession down to the smallest but one, which passed through the stricture, and met with no obstruction in its passage to the bladder afterwards. The stricture appeared to be nearly an inch long, and the urethra seemed to the feel to be much indurated for a corresponding extent. I inquired into the cause of the disease, when he said that he had contracted clap twelve months ago in a neighbouring town, and had applied to a surgeon, who introduced a piece of nitrate of silver into the urethra for a short way, (he thinks about an inch and a half,) once or twice, and, as he stated, "burnt it out very carefully," and he got well in a very short time without any thing else being done. Now it is evident that this case proves two things: 1st, that the cauterizing plan was used before Mr. Childs adopted it; and, 2ndly, that it is not a safe remedy, but that it is liable to produce strictures. It must be evident to all that the above case of stricture was produced by it. It soon followed it, and was *confined* to the parts subjected to the remedy; the gonorrhœa had not time enough to cause it, as it had not existed more than three or four days at most. By using bougies for a short time the stricture was cured. Mr. Childs would do some service to the profession by keeping his cases under his eye, in order to ascertain whether or not stricture ensues, and what condition seems necessary to induce it, and whether a severe application of the caustic is liable to produce it (which is most probable) or not?

If the new mode be found to cause stricture, which I am much inclined to think will be the case, it will be doomed to merited oblivion as an evil to be avoided; those are points which ought to be well ascertained before venturing further with the plan, and which I hope Mr. C. will investigate carefully, and publish the result of the research, until which time I shall not be inclined to give it a trial.—I am, sir,

Your obedient servant,

J. D. BROWN, M.R.C.S.L.

Haverfordwest, Sept. 17, 1843.

PYROLIGNEOUS ACID.

To the Editor of the Medical Gazette.

SIR,

WILL you favour me, by inserting in your number of Friday next, the following observations, which I should have sent to you a week sooner, had not the No. 51 of the LONDON MEDICAL GAZETTE, for 15th Sept. 1843, been delayed a week, in its delivery here, through the negligence of the supplying bookseller.

Dr. Willis, of Brighton, has in that No. inserted some remarks of Dr. Wigan, on the use and efficacy of Beaufoy's Pyroligneous Acid in Tinea Capitis, with a view to a more general trial of that remedy than hitherto. It will doubtless give pleasure to the benevolent originator of the practice, to find, that some of the seed he has attempted to sow has taken root. I hope it will be found that many other practitioners have profited by his instructions as well as myself.

It was not till lately (some two or three years ago), that I read a paper of printed instructions, which in 1843, Dr. Wigan was at the trouble and expense of sending to a great many of the leading medicos of that time. Since the time I have mentioned, I have tried the acid in the way recommended. I have seen its efficacy both as a detector and a curer of the disease in question, in very many cases. I have witnessed its success, also, in the practice of my friend, the highly respectable and intelligent surgeon of the Blue Coat School, in this place, which has until lately presented an extensive field for practice in this disease; indeed, where ringworm had been for many years prevalent, and had bidden defiance to all attempts at cure and eradication.

The summary of my experience is, that Dr. Wigan's remarks and instructions will in every respect be verified; and that my medical brethren, if they try this application, will have to thank Dr. Wigan for an application more efficacious than any other, or all others, hitherto tried: only, to secure a fair trial, care must be taken—1stly, to make out a clear diagnosis; 2dly, if any other disease of the scalp co-exist, to get rid of that disease first; 3dly, the medical man must himself apply the remedy, and not trust to relatives or friends; lastly, to avoid exciting the "disease of the doctor." I have seen the acid used undiluted, without any detriment. The soundness of any previously diseased spot may be tested by the hairs on and around not being plucked out *readily and without pain.*

As an individual practitioner, who has had to wrestle with this disorder, I beg, through your columns, to thank Dr. Wigan for the knowledge of a very valuable remedy in a complaint hitherto very intractable.

For directions, in detail, I must beg to refer to the excellent instructions published by Dr. Wigan.—I remain, sir,

Your obedient servant,

J. J. FURNIVALL, M.D.

Physician to the General Infirmary at Hertford.

Hertford, Sept. 23, 1843.

RETAINED PLACENTA—FATAL HÆMORRHAGE.

To the Editor of the Medical Gazette.

SIR,

IF you think the following case deserving of publicity, you will oblige me by inserting it in your GAZETTE at your convenience.—I am, sir,

Your obedient servant,

J. MOYLE.

Chacewater, Sept. 27, 1843.

I was requested a few mornings since to visit Mrs. B. I accompanied the messenger, and on reaching the house found that she had, about three hours and a half before, given birth to a child, and was then moribund from severe hæmorrhage, in consequence of the gross ignorance of the midwife, who did not know how to remove the placenta, which I found in the os uteri and vagina folded, with bleeding through the canal thus formed. She told me that she had not made any attempt to remove the placenta; nor had she used any means to suppress the hæmorrhage, which was so very profuse that the bed was saturated, a good sized *pot de chambre* half full of coagula, and the floor so deluged that the midwife had a thick rush mat to stand on at the foot of the bed. I immediately gave a little cold brandy and water, grasped the fundus uteri, and after a few minutes easily removed the placenta. She died in about half an hour after my arrival. I wrote to the coroner, and expressed a hope that he would hold an inquest; but to my surprise he took no notice of the case.

Perhaps, sir, you or some of your numerous correspondents will inform me, through the medium of your journal, whether the coroner acted right in allowing this case of—shall I say manslaughter, to pass unnoticed.

USE OF SYMBOLS.

To the Editor of the Medical Gazette.

SIR,

I BEG you will allow me, through the medium of your respectable journal, to communicate to those medical students who may be commencing their logical

studies, a mode of expressing the categorical propositions by pure symbols, which will materially facilitate their labours. I have had some experience with the plan, which I put to the test a few years ago in teaching a medical pupil; he found considerable difficulty with the mixed symbols, as given in books, but readily saw the use of the pure symbols.

The plan consists in simply pointing the distributed terms. The point may be placed before or above the symbol of the term. In writing I usually place it above: thus A will be $\dot{Z}X$ E, $\dot{Z}\dot{X}$ I, ZX and O, $Z\dot{X}$

It is evident that $\dot{Z}X$ must be A, because the subject but not the predicate is distributed. The student will here see at a glance that its simple illative conversion is impossible. By the use of these symbols all the moods may be tried in the different figures in a very rapid and satisfactory manner. The following is Barbara placed in the second figure, Y being the middle term:—

$$\dot{X}Y$$
$$\dot{Z}Y$$
$$\dot{Z}X$$

Thus we detect immediately the common fallacy of an undistributed middle term.—I am, sir,

Your obedient servant,

JOSEPH HOULTON.

87, Lisson Grove, Sept. 25, 1843.

ON

SEMINAL (?) DISCHARGES FROM THE URETHRA;

AND ON THE

INFLUENCE OF CREOSOTE

IN

MUCOUS AND SANGUINEOUS DISCHARGES.

BY R. H. ALLNATT, M.D. A.M. F.S.A.

(For the Medical Gazette.)

MR. JAMES DOUGLAS, in a late number of the MEDICAL GAZETTE (Sept. 29), has detailed a case of what he conceives to be spermatorrhœa, arising from masturbation, and has suggested a remedy which appears to have been as efficacious as Lallemand's plan of cauterizing the urethra; and it certainly possesses the advantage of being much less hazardous to the patient. There is one point, however, in the communication, upon which I feel a little doubtful, and that is respecting the loss of *semen* which is alleged to have occurred "without ejaculation, and with scarcely any erection." A case closely approximating to that of Mr. Douglas fell under my notice a short time ago, and first awakened the suspicion which subsequent facts have tended in some measure to confirm. The case is this:

A man, aged 33, unmarried, who had from puberty been addicted to a solitary vice, contracted at a large boarding-school, came to me in great alarm, stating that when at stool, frequently in making water, and sometimes too in sleep, in the absence of libidinous emotions, he lost a considerable quantity of semen. Upon inquiring into the case, I was led to question the nature of the discharge; and putting him in the way of instituting for himself a careful and minute observation, I subsequently learnt that it consisted of limpid colourless mucus, without the sensible characteristics of pure seminal fluid. The testes in this instance were healthy, not particularly pendulous, and certainly not so flaccid as they should have been had a perpetual drain of their secretion been established. This patient was placed under a course of chalybeate tonics; and without the aid of cauterization, or other local applications, he gradually recovered.

From the anatomical structure of the parts, we can fully comprehend how, by long-continued, preternatural excitation, they may ultimately lose their tone, fall into a state of debility, and the secretions from the patulous orifices of the weakened vessels may be augmented. The prostate secretes a ropy mucus: the glands of Cowper, seated anteriorly to the prostate, also secrete mucus: mucus is secreted in abundance, in certain morbid affections, by the internal coats of the bladder; and the canal of the urethra is bedewed with mucus from the glands and lacunæ scattered throughout its course. A mechanical obstruction is, moeoverr, I believe, offered to the flow of semen, during the passive state of the organ,

by the *sinus Pocularis*, whose mouth being directed forward, forms a valve, which is closed by the collapsed urethra: at all events it is hermetically sealed, during micturition, by the force of the stream, so that no semen can escape "during the time of making water."

Under these circumstances I rather incline to the belief that, in the majority of cases cited by recent authors, the fluid passed is not seminal but mucous; but I shall be glad to learn if there be any *test* to facilitate the discrimination.

Influence of creosote in mucous and sanguineous discharges.

I have published, from time to time, in the medical periodicals, cases which presented themselves to my notice, in which the direct application of creosote to morbidly secreting mucous tissues was followed by speedy amelioration of previously existing symptoms. The first case to which I directed the attention of the profession was that of gonorrhœa (MED. GAZ. Feb. 28, 1840), in which the discharge was subdued by this remedy in the course of a few days. The next was a case of inveterate fluor albus, the details of which appeared very lately. I have just now met incidentally with another case of gonorrhœa, in which the discharge was copious and thick, of several months' duration, and not at all inclined to degenerate into the thin gleety secretion of chronic clap. In this case (for I need not enter into detail) the discharge was arrested at once by the creosote injection, and has not since returned. I may mention, however, that in consequence of the sudden stoppage of the flux, an eruption appeared on various parts of the body, resembling syphilitic psoriasis. It speedily yielded to gentle laxatives, combined with tonics.

The next case is that of purulent otorrhœa: — William Payne, Charles Street, Westminster, one of my morning patients, came to me about a fortnight ago, on account of a discharge from the left ear. The external meatus was filled with thick pus, and the lobe of the ear, and all the parts adjacent, to which the acrimonious matter gained access, were inflamed and excoriated. I ordered an injection, composed of a drachm of creosote, the same quantity of liquor potassæ, and six ounces of water, to be frequently thrown into the tube. The ear and excoriated surfaces were defended by a simple unguent. At the present time the discharge has completely ceased, the natural functions of the organ have been restored, and the sores are healed.

Bleeding hæmorrhoids.—It was by accident I discovered the power of creosote in restraining hæmorrhage from piles. A gentleman was under my care suffering from another disorder, for which I ordered the internal exhibition of creosote. I was not aware at the time that he suffered occasionally great losses of blood from the lower bowel. He surprised me one day by stating, that since he had taken creosote (upwards of a month) the bleeding had not occurred, which had been habitual to him every week or ten days for the last eight or ten years. To test the power of creosote, I discontinued its use for a short time, and the hæmorrhage returned, but in much smaller quantities than before. On returning to the remedy, the bleeding again stopped.

In another case of a similar description the same effects were produced.

It is time we possessed a rational exposition of the action of creosote on morbidly secreting mucous tissues, for I believe it possesses immense power both in restraining passive hæmorrhages, and in subduing inordinate secretions.

4, Parliament Street, Whitehall,
Oct. 2, 1843.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Pulmonary Consumption, successfully treated with Naphtha. By JOHN HASTINGS, M.D. Senior Physician to the Blenheim Street Free Dispensary.

A CURE for pulmonary consumption! We feared the day had gone by when such an agent was to be hoped for; but our apprehensions were premature, and the long-sought-for panacea has at length been found in naphtha.

The first portion of the volume before us is devoted to a general account of the disease in question—its causes,

symptoms, complications, pathology, &c. We then come to the treatment, on which some general remarks are made, and these being disposed of, the particular object of the volume is pointed out, namely, to introduce to the public the remedy above mentioned. The following are our author's remarks on this part of the subject:—

"Thus far regarding the treatment of pulmonary consumption there is little but what has been adopted by some one or other practitioner, although in its connected form it may have some claim to originality; but that which I have now to describe is altogether new, and forms that part of the treatment which may strictly be termed medical. The reasons which induced me to deviate from that line of medical practice, which has so universally and for so long a time been in vogue, for that which I now submit to the profession, was the fatal termination of all cases, whatever was the treatment adopted, during an experience of upwards of twenty years. I was led to the conclusion, from a careful survey of the chemical analysis of tubercle made by Thenard*, and the only analysis of this morbid product in a crude state that I am aware has been made, that it was defective; inasmuch as the composition of the animal matter, which it will be observed amounted to upwards of ninety-eight parts out of a hundred, had not been investigated. From the greasy nature of tubercle in its crude state, there did not exist the slightest doubt in my mind that carbon entered largely into its formation, and that its composition had a striking resemblance to fatty matter. This opinion has been strengthened by the discovery of those spherical globules which I have described in the chapter on the 'Pathological condition of Pulmonary Consumption.' Further investigation may prove that the last change effected in tubercles, before being expelled from the lungs, is a return to that normal structure from whence they derived their existence, which will not only be a curious but highly interesting fact. It may be readily conceived that the morbid action which had for its end the formation and maintenance of tubercles in the lungs would, in a great measure, lose its influence over them when they become softened and more or less separated from the living tissues, with which they were formerly in close connection. For among the changes in the earlier stages of pulmonary consumption none is more remarkable than the disappearance of fat, and as the disease advances all the tissues of the body become more or less attenuated, the muscles of involuntary motion excepted, which it is alleged do not obey this destructive process. There is, however, a want of facts relative to this point to thoroughly decide the question. In consequence of the loss of fat, I determined to employ those compound agents rich in carbon and hydrogen, which had not been previously used in medicine; not with the idea that they would make up the deficiency which the system had sustained in the progress of the disease, but that such a change would by that means be introduced into the constitution as would act upon the forces of the organism at the point of departure from health, whether that took place in the stomach, blood, or elsewhere;—that change tending to such an affinity in the elements within the body, that the carbon, hydrogen, oxygen and nitrogen, instead of assisting in the formation of products which threaten life, would tend to develope those materials only which are required for the perpetuation of health, and the prolongation of existence.

"Naphtha, from its chemical composition and unknown properties as a remedial agent, appeared to me the most likely to stop the ruthless progress of destruction, which pulmonary consumption has effected and is still effecting on man."

The only remark we shall make on this passage is, that we are quite at a loss to understand on what principle the properties of an agent being "unknown," should have led any one to infer that it was capable of producing certain powerful and beneficial effects.

The following is the Doctor's mode of using it.

"I administer naphtha three times a day, in doses of fifteen drops for an adult mixed with a table spoonful of water, which is proportionably decreased according as the patient ap-

* Animal matter . . . . . 98·15
Muriate of soda . .
Phosphate of lime .
Carbonate of lime . } . . 1·85
Oxide of iron, a trace of

proaches youth. After the second or third day, I increase the dose by about one fourth; regulating its increase or decrease, according to the absence or presence of nausea, sickness, or any other untoward symptom arising out of its use. As the disease advances, I increase the dose to forty and even fifty drops, and administer it four times a day instead of three times."

He also informs us that he has employed it in the form of inhalation "with considerable benefit."

Of course, in a question of this kind, every thing depends upon the facts—upon the cases. Thirty-seven such are detailed, but we must confess that to us they are not satisfactory. It is impossible for any reader to know positively whether the patients laboured under genuine phthisis, but he may know whether the details are clear and satisfactory or not. Now with respect to the cases in question we do not think them at all convincing, and we subjoin the third case, because it is very short, and will thus in a very brief space shew our readers the kind of details which are thought sufficient.

"Eliza Dunn, a married woman, aged twenty-seven, residing at 14, James Street, Camden Town, had lost two of her sisters from consumption, and was admitted under my care the second of March, 1843. She had two children living, was now pregnant, and had been subject to frequent miscarriage. During the winters of the last nine years, she had been attacked with cough, and found that it increased during pregnancy. Cough, expectoration, and difficulty of breathing were severe, and though her general health was good, she had wasted considerably in flesh, which was the more immediate cause of her seeking medical relief. Percussion elicited rather a dull sound over both clavicular regions, where the respiratory murmur was harsh. After taking fifteen drops of naphtha, three times a day, for seven days, she was very much better; for the cough and expectoration had subsided, and the respiratory murmur had improved, and percussion yielded a dull sound only at the external end of the left clavicle. On the thirtieth of March, being the twenty-eighth day of her using the naphtha, she was quite well, and the signs from percussion and auscultation were natural."

We fear the reputation of naphtha will prove very volatile, and speedily evaporate.

Lectures on the Principles and Practice of Physic, delivered at King's College, London. By Thomas Watson, M.D. Fellow of the Royal College of Physicians, Physician to the Middlesex Hospital, and formerly Fellow of St. John's College, Cambridge. In two volumes. Parker, 1843.

To the reader of this journal no introduction to Dr. Watson's Lectures can be necessary, as he must already be familiar with them. We shall therefore confine ourselves to recommending them as forming an excellent system of medicine, embracing all the points necessary to be known, and those described and discussed in the clearest and most satisfactory manner.

On Ankylosis, or Stiff-Joint: a Practical Treatise on the Contractions and Deformities resulting from Diseases of Joints. By W. J. Little, M.D. London, 1843. 8vo. pp. 145.

The present treatise may be considered as a supplement to Dr. Little's valuable work on club-foot. Among the subjects discussed in it are ankylosis of the hip, knee, ankle, tarsal, and metatarsal bones, phalanges of the toes, lower jaw, vertebræ, shoulder, elbow, wrist, and fingers. The book comprises the history of thirty-one cases, and is illustrated with thirty-two woodcuts. Dr. Little has again made a useful addition to surgical literature.

MEDICAL GAZETTE.

Friday, October 6, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

THE OPENING SESSION.

The academic session has opened, and the students who have begun the special business of their lives, are fairly embarked in their new and interesting course.

The teachers in their introductory

lectures have explained the objects which they propose to bring before them, the difficulties which lie in their way, and the general plan on which they intend to proceed. Each has shewn the value of his particular subject of instruction, and its general bearing on the art which his pupils are to practise. Each has described, according to his own peculiar views and temperament, the qualities which obtain success, the defects which endanger it, the rewards which attend it. Each has offered solid counsel, friendly advice, cheering encouragement. The teacher and pupil have entered into their mutual compact; good will and confidence mark their intercourse. Hearty greetings have passed between those once fellow students and companions, but long separated, who have enjoyed once more the gathering in the schools of their youth, while they present their sons and their pupils to men whom they have hardly met since they themselves were students. It is an occasion full of interest to all. The man of mature age recals the temptations of his youth, and longs to impart to the young the fruits of his hard earned experience. As he surveys the benches filled with his old competitors, his thoughts revert to the past, and he remembers the qualities and the habits which formerly distinguished those whom he recognises, and he traces to these qualities the various kinds and degrees of success which have attended each in after life. He sees the young man of polished manners, of promising talent, of ready wit, become either successful and happy, or faded and discontented; the man of slow apprehension, of unready memory, of ungainly deportment, either contented with respectable mediocrity, or bearing steadily and phlegmatically the rewards which have followed his labours; he sees those who as youths were accounted wits, sunk into coxcombs, or risen into geniuses. But amidst the great differences which appear to have resulted from apparently similar endowments, and the no less remarkable similarity which has followed remarkable differences, one quality may be relied on as having been present in all who have succeeded, and been wanting in all who have failed, and that is—diligence; persevering unshaken diligence. This inestimable quality, which the shallow and the conceited are apt to think produces monotony and sameness in the character—to be unworthy of the brilliant, and only a desirable for the dull, is on the contrary the very essential element of variety, it developes all the peculiarities of genius, and gives to each the lustre which distinguishes it; as gems when first dug are barely distinguishable from each other, the labour of the jeweller has displayed in each the tint and the water which determines its value.

The involuntary question of all, when a man is brought first under our notice, is, what *can* he do? when we continue to observe him we ask, what *does* he do? and when the great fact of his life has gone forward, what *has* he done? It is so with our inquiries concerning ourselves, and could we group the three questions together in early life, and determine to have each answered to the best of our ability in its turn, we should have taken the important step towards accomplishing the several ends of our existence; but it is not so with us, we entertain but one of the questions at a time, and that one we pursue as if there were no other, and the answer to each can be given only when it is too late to be of use—of use, that is, to ourselves—and then we try to make it of use to others, but they are all too busy answering each the question of his own time to attend to us—and so the great sphinx-riddle goes on un-

answered and unanswerable, in prospective on the whole, though clear as day when we look back on its several parts.

Now, men who have been great in any art whatever have answered each of these questions prospectively. Byron and Dante, and others before them, had to make verses; and Michael Angelo, Canova, &c. to make pictures and statues. Byron could not dance, nor ride, though he thought he could—at least, so says Lady Blessington; but he could row, sail, swim, fight, make love, and other things. In his youth, he asked, with the greatest eagerness, the question "What can I do that I like?" One of his favourite answers was, that he could make verses; and he did so—rather badly at first—but the Scotch reviewers mended his poetry at the expense of his temper, and after that what *did* he do? he still rowed, sailed, swam, and so on, but chiefly and untiringly he made verses, and very good ones he made at last; for his sailing, his swimming, nay, his very love-making, were all made subservient to this one object. Wilkie, when young, found he could draw household implements and odd faces, and could play on the fiddle, and he soon found that he had to paint pictures for dear life. So to work these men went—they chiselled, and wrote, and painted again and again. Wilkie's diary tells us little else than that he painted all the week, and went to church on Sunday. He, then, Byron, and others, answered the third question, "What have they done?" to the entire satisfaction of all the world; and their answers are hung up in the Tribune, the Vatican, and other conspicuous places.

All who do great things have answered these questions well, though some, it may be, without knowing it. The business of education, the prime duty of teachers, is to point out the way of getting the right answers in the right order; to arrange what they teach with a view to what is to follow. Whatever knowledge does not serve this purpose it is pity to have learnt. The physical qualities of the Materia Medica may be known to a labourer in a drug warehouse, and human anatomy to an observant grave-digger; but the physician and surgeon want them for therapeutics, and for operations. And the main business of learning, the prime duty of the student, that to which we would earnestly and affectionately exhort him, is to look well to the future value of his present pursuits—to take the opinions of the experienced as to the employment of his time and powers—that his youth may be spent judiciously in inquiring what he can do, his active life profitably in what he does do, and his old age honourably in the contemplation of what he has done.

It is often wished that the knowledge of one man could be bequeathed entire to another, and that the progress of science might be rapid and uninterrupted; but what this would do for science, and for mankind generally, would also be done for individuals if the powers and acquirements of each period of life could be rendered wholly available to the next. The child being "father to the man," what giants might thus be begotten, but the limits placed by Almighty Providence are not less wise in the one case than in the other; and when we indulge in such Titanic aspirations, it may truly be said, "Cælum ipsum petimus *stultitiâ*;" but a healthy desire for a perfection which is abstractedly unattainable, is not only innocent, but a wholesome stimulus to obtaining that which is practically within our reach; and we may laudably strive in detail after that which the wildest dreams of fancy cannot hope to realise entire. The great advantage

of special and well-directed study over that which is irregular and desultory, is, that its tendency is uniformly progressive, and its results, in their kind and degree, useful and satisfactory.

In an experimental art like ours especially, discipline of such a course is invaluable, and the benefit certain. We observe this when circumstances allow of genius taking its own bent; following its eager yet steady course. It weaves and moulds all surrounding objects to its own purposes. Difficulties, if not insuperable—and how few difficulties are so to true genius—only supply training and discipline. Genius, however, is the lot of but few: talents, few or many, are given to all; and when to some they prove wholly useless and unprofitable, the fault lies in their direction and application.

We have reached a critical period in science and art. Many old views, on which practice has been founded, seem likely to be superseded by new ones; and many that have been long forgotten are being revived as novelties. Not only public opinion has received some shocks, more than enough to unsettle its ill-grounded notions on professional subjects, but professional opinion likewise rests but loosely on many of its fundamental points. Doubt, the parent of belief, has produced an unusual farrow of credulities, fed and fattened without greatly reducing the bulk of their dam. We are called on to believe implicitly in every thing but what has the progressive experience of ages on its side. Now in such times, such "awful crises," which philosophers of the *poco curante* sort tell us happen every ten years or oftener, the man of solid learning and attentive habits will in the long run have an immense advantage. "Schools and the schoolmen" will always be more or less sneered at; but it is remarkable that while common sense points out that those who know most of what is taught in the schools have the best right to criticise their lore, it is precisely those who know least about them—the least learned—who are most flippant on the subject.

Truly the Sydenham Society is likely to be very useful: it will do a world of good to our profession to get a little more *learning* into it; men of really original and powerful minds will be made more original and more powerful. Those who are neither the one nor the other may perhaps by study find out their deficiencies; or if this be too much to hope for, the number of those who think too highly of them will be diminished, and that will be something gained.

Clever theorists, who are unlearned, often do the same service to science that unprincipled demagogues do for a state—they clear away much rubbish by the reforms they effect, but they also destroy much that is good, the value of which was unknown to them; and no successful revolutionist ever failed to discover this sooner or later: some have honestly avowed this conviction, but all have betrayed it. Clever men who *are* learned move more slowly; their reforms, when they venture on any, are conservative, not destructive; yet their progress in the end is often greater.

For the student there is but one safe course—to strive to know all that is taught him; he will have much to teach himself after all is learnt that can be taught him by others, and if he has real genius, his subsequent flight will be none the worse for his taking wing from the solid vantage ground of progressive experience, even though the materials which compose it be held together by a theory which is doomed shortly to crumble away.

TWO LATE CORONERS' INQUESTS.

An inquisition was held on the 30th ult. and 2d inst., before Mr. Baker, on the body of Francis Chalkley, aged 40. It appears, that on the 9th of August he took six grains of blue pill, and three of calomel, which produced a mercurial fever, under which he sank, and died on the 26th of September.

That so small a dose should produce so violent an effect, though extraordinary, is not unparalleled. Thus, we find it stated by Dr. Christison that "Fifteen grains of blue-pill, taken in three doses, one every night, have excited fatal salivation. Nay, two grains of calomel have caused ptyalism, extensive ulceration, exfoliation of the lower jaw, and death*."

In the report of the first day's inquest (Times, Oct. 2d), a medical witness was made to say that the dose was "inordinate," and sufficient for at least three persons. This must surely be a mistake of the reporter's; for, not to mention that Sydenham recommends a scruple dose of calomel, the large quantities given in our own day by the surgeons of India, and others, suffice to show that the dose administered to Chalkley was within very safe limits. We are far from recommending the practice of pushing the doses of mercurial remedies, but six grains of blue-pill, *plus* three of calomel, are probably not more than the every-day dose of five grains of calomel.

Mr. Dickinson, who prescribed the medicine, is confined for debt in Whitecross Street Prison, where he occasionally officiates for Mr. Wadd, the visiting surgeon. He does not possess the diploma of the College of Surgeons, nor is he a Licentiate of the Apothecaries' Company; but he is described by Mr. Wadd, in his evidence, as a highly respectable man, and formerly an apothecary and a general practitioner at Egham. We therefore conjecture that he may have been in practice before 1815, and thus be a qualified practitioner, though without a license. Mr. Wadd "thought that the dose might have been given twice instead of once."

Since writing the above, we have read a very sensible letter by Mr. Dickinson, in the *Times* of Oct. 4th. Mr. Dickinson has been in practice upwards of thirty years, and may therefore be a qualified practitioner though without a diploma, as we had conjectured. The salivation was, no doubt, owing to a remarkable idiosyncrasy; unless we attribute it to some pills of unknown composition which the deceased took afterwards, as he confessed to Mr. Dickinson.

The jury brought in a verdict of natural death, but called the remedy administered "an overdose of strong medicine."

Another inquest was held on the 30th ult. before Mr. Baker, at Haggerstone, on the body of Mary Haynes, aged 25.

Her husband, following the instructions of one of those hideous books engendered by the theories of Malthus, had given her large doses of some medicine in order to procure abortion. It appeared, on a post-mortem examination, that she was not pregnant, and that she died of sanguineous apoplexy, and inflammation of the stomach.

The chief point of interest in this inquest is, *what was the poison administered?* The witnesses in the report (Times, Oct. 2d), all call it the sulphate of potass. Now, although sulphate of potass is a harmless medicine in small doses, it is possible that it may cause death when administered without limit. Even common table-salt has been fatal in the prodigious doses in which it has been given for worms in domestic practice. The man Haynes bought a quarter of a pound a fortnight before her death, which she took in small quantities; and then gave her two ounces more on Tuesday (Sept. 26th) and two more on Wednesday; she died early in the morning of Thursday the 28th.

Most readers would conjecture that the medicine meant was the *sulphuret of potass;* but had Mary Haynes taken two ounces of this violent poison on Tuesday, and two more on Wednesday, would she have been in good spirits and laughing on Wednesday evening, as Sarah Reynolds, one of the witnesses, testifies?

In the two cases recorded by Dr. Christison, where sulphuret of potass proved fatal, death took place in less than fifteen minutes, and in one the

* Christison on Poisons, 1st Edit. p. 303.

dose was about three drachms.* The two surgeons who opened the body were Mr. M. Pickering, and Mr. G. W. H. Coward. The former calls the medicine *sulphate* of potass, but says "its component parts are equal portions of sulphur and potass," which is a description of the *sulphuret* of potass.

Mr. Coward, on the other hand, says "the sulphate of potass did not come under the denomination of a poison, but was a violent purgative, which required to be administered with great care. Witness believed that two ounces of the drug would cause sickness, from which inflammation might arise, and the blood flowing to the head might then cause apoplexy. There could be no doubt that the drug was the remote cause of death."

We await the termination of the inquiry. If it should turn out that the poison was the sulphate of potass (as we are inclined to think it was) this will be the first case on record of poisoning by that neutral salt. If it should prove to be the sulphuret of potass, it will be equally singular that such enormous doses should have been required for a fatal effect.

Since the above was written, our supposition that the salt was *sulphate* of potass bas been substantiated by witnesses at the adjourned inquest. On Tuesday, the 3d inst. the jury brought in a verdict of wilful murder against William Haynes.

How much it is to be regretted that the evidence at Coroners' Inquests is not reported by medical practitioners! The evidence for a single year only would be a mine of instruction in toxicology.

* Christison on Poisons, p. 171.

CLINICAL REPORTS OF CASES

TREATED AT THE GLASGOW EYE INFIRMARY.

By William Mackenzie, M.D.

Case of lenticular cataract, treated by extraction — Section of the cornea made with a moveable needle-knife—Remarks on needle-knives.

Case.—No. 12315, Aug. 4th, 1842.—John Wylie, aged 62, a weaver. Fully formed lenticular cataract in left eye; same disease in right eye, but not so far advanced. Both retinæ sensible. Slight strabismus divergens of left eye. Says his mother, and two sisters of his father, had cataract.

12th.—The patient being laid on his back, the left cornea was transfixed by the needle of an instrument, in which a needle is combined with a moveable extraction-knife; the knife was then moved forwards, and the section made, parallel to the upper edge of the cornea. The capsule-needle was introduced, and the capsule divided. A part of the surface of the cataract was soft; the rest, being nearly of the natural size of the lens, was firm, and was easily extracted. The cornea was now gently rubbed, through the medium of the upper lid, till the pupil was seen to be of a natural size, and in its natural place. The eyelids, on each side, were brought together with a stripe of court plaster.

14th.—No pain.

15th.—Eye looks well.

21st.—Flap of cornea in its natural situation. Wound does not appear to be united. Pupil a little irregular. Vision good.

Appl. Extr. Belladon. ad supercil. sinist.

22d.—Cornea hazy. Says things appear very white.

Cap. Pil. Calomel. gr. ij. et Op. gr. ss. m. et v.

30th.—Capsule pretty opaque. Pupil irregular, and drawn back towards capsule. With a double convex lens tells the hour on a watch with left eye.

Remarks.—No further reports appear in the journal. Previously to last report the wound of the cornea had perfectly united. He was soon after dismissed, cured by operation, being able with a cataract-glass to read an ordinary type. The iritis which took place in this case was attended with no pain, and scarcely any external inflammation. It left the pupil a little irregular, and the capsule partially opaque.

The section of the cornea being made with an instrument not in common use, I may take this opportunity of making some remarks on *needle-knives*. As the name imports, these instruments combine the qualities of a needle and a knife. They are of two sorts, the *fixed* and the *moveable*; and the first invention of both sorts we owe to the same surgeon, Pallucci*.

Daviel, who, though not the inventor of extraction, was the first to practise that operation as an ordinary means of removing cataract, began the section of the cornea at the middle of its lower edge, with an instrument like a lancet. This must have permitted the aqueous humour to escape. He then insinuated into the wound another lancet, blunt at the point, but cutting on the

* Descriptio Novi Instrumenti pro cura Cataractæ, nuper inventi ac exhibiti a Nat. Joseph. Pallucci. Viennæ, 1763.

edges; and with this he enlarged the incision a little bit towards the nose, and a little bit towards the temple. He invented two pairs of scissors for the completion of the section. Each pair was doubly bent, the one so that it was fitted for completing the section on the nasal side of the eye, and the other on the temporal side. Thus, with four different instruments, Daviel completed a semicircular section of the cornea. It was probably the fear of wounding the iris which led him to this cautious and complicated mode of operating. He does not appear to have had the least idea that the same section could have been much more easily accomplished by one stroke of a knife, carried across the anterior chamber. The effect of the refraction of the aqueous humour and cornea is to make the iris appear convex, and nearer to the cornea than it really is. Perhaps this may have misled Daviel from the proper mode of opening the cornea.

Two reasons must have weighed with succeeding operators to employ a different mode of operating from that of Daviel. The one, the complexity and difficulty of such a proceeding; for not only are the instruments by far too numerous for so simple an incision, but it is difficult to effect the purpose intended, after the aqueous humour has made its escape, the cornea lost its tension, and the iris is pressing into the wound. The other, the danger of such a haggled, irregular, and partly bruised wound not healing; for an incision of the cornea which is sawn, and not cut at the first stroke, or still worse which is clipped, does not heal in general by the first intention; but its edges swell and suppurate, close by a tedious process, and leave a broad and injurious cicatrix.

Whether Pallucci was the first to think of cutting the cornea with a single instrument, and by a single stroke, I do not know. The instrument which he invented for that purpose was a needle-knife, of the *fixed* kind. The knife part was triangular, not unlike Beer's knife, only not so broad, while the point of it was prolonged into a lance-shaped needle. Having transfixed the cornea with the needle part of this instrument, by a simple progression towards the nose and over its arch, the knife effected a semicircular incision of the cornea. The disadvantage of such an instrument (and both Siegerist and Weidmann have recommended fixed needle-knives) is, that the point of the needle, unless the handle of the instrument is kept very much back towards the temple, comes into contact with the side of the nose, makes the patient start, and may thus ruin the operation.

It was probably this disadvantage of the *fixed* needle-knife which led its ingenious inventor to the contrivance of a *moveable* one. This consisted of a needle, fixed in the handle, and grooved on its lower edge, while along the groove there played a knife, which, by pressure on a knob at the extremity of the handle, could be moved forwards. With the needle, then, which formed part of this instrument, Pallucci transfixed the cornea, and then, keeping the needle steady, he moved the knife on, till the section was completed.

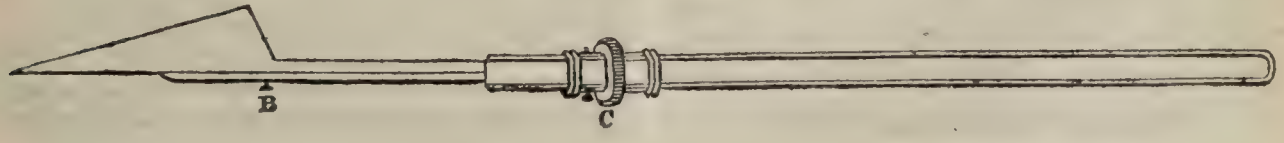
It was from Pallucci's moveable needle-knife that I took the hint to have the one made with which I operated on Wylie. I omitted the groove along the lower edge of the needle, as I thought that was likely to allow the aqueous humour to escape; but in other respects there is no essential difference between the two instruments. The needle part I made broader and longer; broader, so that in transfixing the cornea with it I might accomplish a certain considerable portion of the section; longer, that there might be less risk of the point of the needle slipping out of the nasal part of the cornea when I came to push on the knife. Pallucci's knife was convex on the edge; I made mine straight, exactly like Beer's knife, that it might traverse the cornea with the least possible resistance.

Figure 1 shows the knife I used, reduced one-third, with the knife retracted, and its cutting edge directed upwards, as it will be held when the operator means to open the upper half of the cornea.

Fig. 1.

Figure 2 shows the knife pushed forwards, as it is when the section is completed.

Fig. 2.



The nail A, screwed into the back of the knife, serves to keep the edges of the needle and the knife in contact, and travels along a slit to B. The thumb, pressing on the verrouil, C, moves the knife forwards, in making the section.

The following are some of the advantages which appear to attach themselves to such a moveable needle-knife.

1. It is much easier to traverse the anterior chamber with a needle than a knife.

2. It is much easier to perform the counter-punctuation of the cornea accurately with a needle than a knife; and how much depends on counter-punctuating well, every operator is aware. The size and form of the section, depend, in a great measure, on exact counter-punctuation.

3. There is less risk of the aqueous humour being evacuated in traversing the cornea with a needle than with a knife.

4. The cornea being transfixed by the needle part of the instrument, the knife moves along a director, with perfect steadiness and certainty, and completes a regular section of the cornea, at a definite distance from its edge.

The chief disadvantage attending the use of a moveable needle-knife (and which, though it did not occur in the least in Wylie's case, I have experienced on some subsequent occasions), is, that the pressure, necessary for moving on the knife to make the section, is apt to be accompanied with a retrograde movement of the needle, so much so that it slips out of the nasal side of the cornea, and allows the aqueous humour to escape. This danger may be partly obviated by having the instrument exceedingly well finished, so that the knife moves sweetly along the needle, and yet is not at all loose or unsteady. It is difficult to adapt the two pieces, of which the instrument consists, to one another with perfect accuracy, and yet slide along each other with the necessary freedom.

It occurred to me, soon after I began to try the moveable needle-knife, that if, instead of the needle and the knife forming part of the same plane, they were placed side by side, the motion of the knife might be rendered steadier and easier. I was confirmed in this notion by the examination of an instrument, invented by Dr. Louis Stromeyer, for artificial pupil, and called by him a *korectom*. It is in fact a needle-knife, the mechanism of which is extremely neat and well-finished. I therefore ordered a needle-knife to be made, pretty much like Professor Jäger's double knife, only that instead of two knives running side by side, there was to be a needle and a knife. The instrument, so modified, I have hitherto had no opportunity of trying. I may mention, that Dr. Stromeyer's instrument is a knife for at once making a section of the cornea, and cutting out an artificial pupil. He describes and figures it in a pamphlet, published at Augsburg in 1842, and entitled, "*Das Korectom.*" The needle is grooved along the side which regards the knife, for the purpose of allowing the aqueous humour to escape, and the iris to fall forwards, so as to be divided by the knife, which, on being pushed on, makes a section of the cornea, and cuts fairly out a piece of the iris. Of its merits as an instrument for thus forming an artificial pupil by central excision I can say nothing. For the sight of Dr. Stromeyer's instrument, and the pamphlet in which it is described, I am indebted to my friend Dr. Hamilton, of Edinburgh.

The chief objection to a needle-knife for making the section of the cornea in extraction, in which the needle and the knife do not lie in the same plane, but side by side, will be the thickness of the instrument, and the danger, that, by its thickness, it may press so much on the aqueous humour, and through the aqueous humour on the lens, and through the lens on the vitreous humour, as to cause rupture of the hyaloid membrane before the section is completed, so that just as the section is finished the lens and part of the vitreous humour bolt together out of the eye. This is a danger which attaches itself even to a common cataract-knife, if it be too thick, if the aqueous humour be not allowed to escape before finishing the section, and especially if the subject be old, and the hyaloid membrane weak. How much more likely will it be to occur, if, to the ordinary thickness of a cataract-knife, there is added that of a needle!

Some time after I had given an order to the cutler for a new needle-knife of the kind last mentioned, I met with an account, in the *Annales d'Oculistique* for April 1843, of an instrument exactly similar, the invention of Professor Blasius, of Halle. Having made the punctuation with the needle, he follows the plan of Wenzel, dipping the point of the instrument into the pupil, and opening the capsule; he then effects the counter-punctuation, pushes on the knife, and completes the section. The lens often follows, we are told, without any pressure on the eye, and of course without the introduction of any second instrument for the purpose of performing what is commonly called the *second* period of the operation. The supposed advantages of conducting the operation in Professor Blasius's way, and with his needle-knife, are set forth in a thesis by Dr. Van den Porten, entitled, *Dissertatio de Cataractæ Extractione, adjecta nova extrahendi ratione.* I may notice, that, as Professor Blasius always keeps the needle towards the iris, he requires two

instruments, one for the right and another for the left eye, whereas the needle-knife with which I operated on Wylie answers for either eye.

REMARKS ON
DR. BIRD'S REPLY TO MR. CAMPLIN.

To the Editor of the Medical Gazette.

SIR,

ON looking through your valuable number of to-day, and finding no observation whatever, from the pen of Mr. Camplin, relative to the very extraordinary reception of, and reply to, his letter in the MEDICAL GAZETTE of the 1st inst. by Dr. F. Bird, I am induced, notwithstanding the probable charge of needless quixotism for my pains, to offer a few words defensive of my too retiring neighbour and friend.

I must confess that after the very proper and conscientious letter of Mr. C. (unostentatious in itself, and seeking only "to render honour to whom honour was due,") I was romantic enough to have hoped that, when noticed by Dr. Bird, it would have been in the spirit of thankfulness for the mild rebuke of an older and more considerate practitioner, and been followed by a prompt and manly acknowledgment of an omission, for which so easy and effective atonement could *instanter* have been made; but—alas! for modern optimism—Dr. B.'s anxiety for personal distinction being greater than his solicitude for moral elevation, he became irritated by reproof, gentle as it was, and, with a too prevalent sophistry, tried to throw a doubt over the "motive" which his egotism would not allow him to respect; and in turn has assailed Mr. Camplin in a manner at once disingenuous and irrelevant.

Now, having had the gratification of personally assisting at both of Mr. Walne's cases, I must beg to make one or two very brief remarks upon that detailed by Dr. Bird (No. 47, Aug. 18), and, in so doing, I shall be most happy to do that justice to the Dr.'s claim to originality, which his own want of boldness has prevented him from doing himself. Imprimis, then, the preparatory treatment, abstinence, enema, pills (to a grain), the exploratory incision, &c. were so identical with the preliminaries of Mr. Walne, more especially those of his second case (then unpublished), that I should have imagined Dr. Bird had obtained them from that gentleman himself, had not the "obscure little paragraph" of Mr. Camplin induced the doctor to inform your readers, that he, Dr. B. "happened to be in attendance upon a lady, one of whose medical attendants had frequent opportunities of watching Mr. Walne's (second) patient, and that he thus *occasionally* heard of the progress of the case." Now, sir, what pity that Dr. Bird's want of boldness prevented him from informing them that this lady *resided in the same house* with Mr. W.'s patient, and that he there *personally* and *daily* obtained his information; what pity his want of boldness prevented him from making his inquiries openly of Mr. Walne himself, whose *penumbra* he must so frequently have been.

2d. The length of the incision and puncture of the cyst differ very decidedly from the practice pursued by Dr. Clay and Mr. Walne; and the peculiarly happy medium so energetically claimed by Dr. B. between the "unnecessary large incision" and the inch and a half cut, has just this degree of novelty, that. in a case of twenty years since, alluded to in Mr. Walne's first paper, but ingeniously overlooked by Dr. Bird on his "careful perusal," the incision was of $3\frac{1}{2}$ inches; thus giving a *problematical* half inch to the Dr.'s boldness of improvement.

3d. The triple ligature, and succeeding steps of the operation, were closely imitative of Mr. W.'s proceedings, whilst the only other prominent deviation from so good an example shews how truly Dr. B. may assert his having "profited so little by the recorded cases." I allude to the substitution of the water dressing and *few* sutures, for the comparatively close stitches, and lint and plaster support, so carefully applied by the antecedent operator, and which, if adopted by this half-and-half copyist, would in all probability have saved him the mortification of subsequently viewing his patient's intestine outside of the abdomen.

In the after treatment of the case, the choice of the anodyne, the dietetic character, &c. are unacknowledged imitations; the originality of this portion only amounting to the evincing that, if the printed statement be not defective, then the treatment most assuredly was. *Exempli gratiâ:* on the morning after the operation we have this entry. "5 A.M.—Complains much of pain at the lower part of the abdomen; ℥xij. of high coloured turbid urine drawn off by catheter." Now I can only here surmise that Dr. Bird having omitted to evacuate the bladder of the patient before he retired the previous night, was summoned at this early hour to remedy the effects of such inadvertency. I confess this may be only surmise. But again: "10 P.M.—Heat of skin, &c. &c.: ℥xij. of urine drawn off by catheter." Here is an interval of *seventeen hours*, during which the patient is ostensibly exposed to the chance of whatever irritation might arise from so protracted a retention. Surely this borders closely upon the "absurdity of refusing to learn by recorded experience."

Of Dr. F. Bird's parting call upon Mr. Camplin, to inform him "where he (the Dr.) can meet with any addition he (Mr. C.)

has ever made to medical science," the petulance is about on a par with its irrelevancy. Unlucky call! Why, sir, were this the first time that Mr. Camplin had put pen to paper in relation to professional advancement, he has, in this brief exposé, established his claim to the gratitude of the rising generation, by bringing forward additional proof that in the practice of surgery "honesty is the best policy," and that in the science of *medical ornithology* your readers must be careful to avoid mistaking borrowed feathers for natural plumage.

With the best apology for my intrusion on your pages—the sincere desire of seeing the moral character of the profession maintained and exalted—I beg leave to subscribe myself, yours very obediently,

CHARLES LAW.

3, Artillery Place, Finsbury Square,
Sept. 15, 1843.

VIVISECTION.

To the Editor of the Medical Gazette.

SIR,

SINCE my remarks on Vivisection appeared in your journal, I have received communications, by which I find that the profession take more interest in the question than I had anticipated, and that Dr. Hull and myself are by no means so singular in our views as I had feared.

As I am quite ready to redeem the pledge I gave in my letter to you, I would suggest, in order to economize the space of your columns, and the time of the contributors to this discussion, that gentlemen who think that vivisection is a profitable or philosophical mode of inquiry, should point out any set of experiments which they may consider it difficult or impossible to dispose of in the manner which I have asserted. If *I* were to select them, there might be perpetual cavil at the *selection*, or if I chose the more recent, as those of my contemporaries, objections of another kind might be urged. But if the experiments by which the general question is to be tested are chosen by other people, I am responsible only for the manner in which I proceed to analyse their influence on the progress of pathological science, as applied to the cure of diseases. In the meantime, I think the passages to which I referred you seem as good an opening as *I* could give; and if no one sends you any thing that you like better, or if the article is too long for your columns, I will try to get it admitted in some of the larger periodicals.

I have the honour to be, sir,
Your obedient servant,
GEORGE MACILWAIN.*

9, Argyle Place, Sept. 26, 1843.

* ERRATUM.—In my last letter, line 11, for "instructive" *read* "inductive."

SCHOOL OF PHARMACY.

THE qualified Chemist is entitled to adequate recompense, not only for the labour or exercising his skill, but also for the labour which he has previously undergone in acquiring it. His time constitutes a portion of his capital; and its value must be estimated before the *cost* price of his goods can be correctly ascertained. In making this calculation, a variety of circumstances relating to the nature and peculiarities of his business must be taken into consideration; but the hypothesis upon which all our arguments are founded, is the presumption, that all the individuals composing the body are qualified. In order to make our hypothesis correct, we must defer the main argument for the present, and call the attention of our readers to the means by which alone the desired improvement in our character and position is likely to be effected.

The School of Pharmacy is the ladder by which we may hope to ascend to our proper place in the profession. The existence of such an institution is a practical demonstration of the fact, that our business is not merely a mechanical trade, but that it requires in those who follow it a certain amount of mental cultivation and scientific knowledge. That many members of our body are thus qualified we fully believe; but the nature and extent of such qualifications of each individual, as well as the means by which they have been acquired, are known only to himself. The branches of study with which the pharmaceutical chemist should make himself acquainted have not until lately been clearly defined, and are not even now insisted upon. In fact, the only class of Pharmaceutists who are obliged by law to pass an examination in Pharmacy are the Apothecaries. The chemists are left at liberty to use their own discretion in the matter; those who possess the means and the inclination to study their business as a profession, learn just as much as is convenient to each individual, and no more; others trust in the blue and red bottles, and all are classed together as Chemists and Druggists.

But this state of things cannot continue. The responsibility which rests on those who prepare and compound medicines is felt by the public; and the time must soon arrive in which the educated Chemist, who has made himself acquanted with the principles and sciences, will no longer be confounded with the Chandler, the Grocer, or the Oilman.

However humiliating it may be to acknowledge that imperfections exist among us, it must be a source of satisfaction to every one who feels interested in the credit of his profession, to reflect, that the whole of the

operations which are now in progress for the advancement of education in our body, emanate from ourselves. It must also be recollected, that whatever stigma may be thought to exist, cannot belong to those who are engaged in the work of improvement, but to the disaffected who are contented to remain stationary, while every other class of men is advancing with the times. And since we have every reason to believe that a very large proportion of our number cordially unite in the undertaking, and feel themselves identified in its results, it is not too much to expect, that all our members, in proportion to the opportunity within their reach, will co-operate in promoting the prosperity of the *School of Pharmacy.—Pharmaceutical Journal.*

NEW MODE OF DETECTING ARSENIC.

A SHORT time since Professor Reinsch proposed an entirely new method of detecting arsenic, which consists in acidulating any suspected fluid with hydrochloric acid, and heating a thin plate of bright copper in it, upon which the arsenic is deposited in a thin metallic crust, and then separating the arsenic from the copper, in the state of oxide, by subjecting the copper to a low red heat in a glass tube. Organic fluids and solids may be prepared for this process, by boiling them for half an hour with a little hydrochloric acid, solid matters being cut into shreds, sufficient water being added to let the ebullition go on quietly. Continue the boiling until the solids are dissolved, or reduced to minute division. Nothing can be more easy than the method of Reinsch. It is also exceedingly delicate; for it will detect a 250,000th part of arsenic in a fluid, and it does not leave any arsenic in the subject of analysis which can be detected by any other means, even by the delicate process of Mr. Marsh. I have lately employed it as the means of furnishing irrefragable evidence in criminal inquiries.

The separation of arsenic upon copper, from a solution, by means of hydrochloric acid and heat, is a new fact in chemistry; and the experiment furnishes a test so far, that if the copper be not tarnished, arsenic cannot be present. But Reinsch's discovery cannot be regarded as a *positive* test, because as he himself has pointed out, bismuth, tin, zinc, and, above all, antimony, will, under the same circumstances, yield a coating to copper sufficiently similar to render it necessary that the deposit be examined other than by the eye only. Reinsch's process, however, is of far greater value than if it had merely presented a new test for arsenic. It constitutes the easiest and most secure mode of so separating arsenic from complex mixture, as to enable experimentalists to apply to the metal any of the tests for arsenic already known; and, in my opinion, no method of testing for it approaches the following in conclusiveness;—Cut the copper on which the arsenic is deposited into small chips, so that they may be easily packed at the bottom of a small glass tube. Apply a low red heat. A white crystalline powder sublimes, in which, in the sunshine, or with a candle near it, a magnifier of five powers will show the equilateral triangles composing the facets of the octahedral crystals, which are formed by arsenious acid when it sublimes. Sometimes the three equal angles, composing a corner of the octahedron, may be seen by turning the glass in various directions. If triangular facets cannot be distinguished, owing to the minuteness of the crystals, then shake out the copper chips, close the tube with the finger, and heat the sublimed powder over a very minute spirit-lamp flame, chasing it up and down the tube until crystals of adequate size are formed. Next boil a little distilled water in the tube over the part where the crystalline powder is collected, and, when the solution is cold, divide it into three parts, to be tested with ammoniacal nitrate of silver, ammoniacal sulphate of copper, and sulphuretted hydrogen, either in the state of gas or dissolved in water. I am surprised that during the last four or five years, neither Orfila, nor M. Lassaigne, nor Liebig, nor Mr. L. Thomson, nor Mr. Watson, nor Mr. Marsh himself, nor any other experimentalist, excepting in Scotland, has thought of applying as a test of an arsenical crust, the conclusive process described above, and first suggested to me in 1826, by the late Dr. Turner, which consists in converting the metal into the oxide in such a way as to allow the form of its crystals to be determined. The method has been in constant use in medico-legal researches in Scotland. Yet, what other method is so satisfactory? What substance, other than arsenic, yields the white sublimate with triangular facets, or leaves the substance in such subjection to so many excellent tests?

In boiling substances in the weak hydrochloric acid, a decided excess of acid must always be present,—two fluid drachms to every eight ounces of liquid; but if the matter be animal texture in decay, much more acid may be necessary, owing to the presence of ammonia, which gradually neutralizes the acid as the solution goes on. Filtration of the fluid after the acid has acted sufficiently, seems advisable, otherwise organic particles may attach themselves to the copper, and give rise to empyreuma, when the metallic arsenic is driven off by heat. When the arsenic in the fluid is supposed

to be small, nearly half an hour should elapse before the copper or copper-leaf is removed. Before applying the sulphuretted hydrogen as a test to the solution of the sublimed oxide, the solution must be acidulated with hydrochloric or acetic acid. In every case the whole process should be applied in the first instance to distilled water, acidulated with the hydrochloric acid to be employed afterwards; and if the copper be tarnished, a purer acid must be obtained, or the copper must be subjected to the subsequent steps of the process, in order to ascertain whether the tarnishing be occasioned by arsenic or not.

I have successfully employed the preceding method in two medico-legal cases, where the bodies had been buried for four months, and I consider that it must soon supersede the beautiful but much more elaborate method of Marsh.—*Dr. Christison, in Lond. and Edinb. Journ. of Medical Science*, Sept. 1843.

ON THE EMPLOYMENT OF BELLADONNA IN THE TREATMENT OF PHIMOSIS AND PARAPHIMOSIS.

By M. De Mignot.

M. De Mignot, having derived benefit from the application of an ointment of belladonna in cases of phimosis and paraphimosis, recommends its employment in every case before having recourse to the knife. The ointment is made in the proportion of twelve grains of the extract of belladonna to thirty grains of simple cerate, and with this the prepuce is rubbed every hour. The dilating power of the belladonna soon begins to act, and in many cases an operation may be avoided. When the inflammation is violent, and the pain intense, he recommends to add a little opium and mucilage of quince seeds. —*L'Experience*, Dec. 15, 1842; and *Edin. Med. and Surg. Journ.* Oct. 1, 1843.

SINGULAR MADNESS OF A NAVAL CAPTAIN.

Her Majesty's Brig the Lynx, mounting three large guns, was lately lying off the town of Cove, when her Commander, Capt. Burslem, gave the order to clear the decks for action. This was immediately done, the guns were primed and loaded, and in a few minutes after, Capt. Burslem ordered the guns to be fired upon the town. The officers next in command now consulted together, persuaded the captain to go below, secured him, and reported the affair to the Admiral of the squadron. Captain Burslem was immediately removed, and the town of Cove escaped demolition by the hands of a madman.—*Times of October 3, from the Cork Reporter.*

NOTE FROM MR. DUNN.

To the Editor of the Medical Gazette.

Sir,

A fatal case of cancrum oris, complicated with measles, has occurred in my practice within the last few days, and on which a coroner's inquest has been held, from the suspicion that the child died from the effect of mercury. I think it a duty which I owe to myself and the profession to publish the case, and shall take the liberty of sending it for insertion, with your permission, in the next week's Medical Gazette. The most correct report of the inquest I have seen appeared in the *Morning Post* of yesterday. I have to regret that time will not permit me to send it this week.—Your obedient servant,

Robert Dunn.

15, Norfolk St., Strand, Oct. 5, 1843.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, September 28, 1843.

R. Webb, Cambridge.—J. Colegrave, near Banbury, Oxfordshire.—A. N. Hawthorne.—C. Girdlestone, Landford, Wilts.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, Sept. 23, 1843.

Small Pox	4
Measles	38
Scarlatina	64
Hooping Cough	21
Croup	4
Thrush	16
Diarrhœa	59
Dysentery	28
Cholera	11
Influenza	1
Ague	0
Remittent Fever	1
Typhus	33
Erysipelas	3
Syphilis	0
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	156
Diseases of the Lungs and other Organs of Respiration	193
Diseases of the Heart and Blood-vessels	14
Diseases of the Stomach, Liver, and other Organs of Digestion	120
Diseases of the Kidneys, &c.	5
Childbed	7
Paramenia	1
Ovarian Dropsy	0
Disease of Uterus, &c.	0
Arthritis	0
Rheumatism	5
Diseases of Joints, &c.	4
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	106
Old Age or Natural Decay	55
Deaths by Violence, Privation, or Intemperance	31
Causes not specified	3
Deaths from all Causes	983

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, OCTOBER 13, 1843.

GULSTONIAN LECTURES,

Delivered at the College of Physicians, February, 1843.

By George Budd, M.D. F.R.S.

Professor of Medicine in King's College, London.

Lecture II.

I come now to consider the causes capable of exciting inflammation of the liver that terminates in suppuration and abscess.

With the view of discovering these, I have tabulated the chief circumstances of 59 cases in which one or more abscesses were found in the liver after death. 15 of these cases occurred in my own practice at the Dreadnought, in sailors, most of whom had been in the East; 15 were collected by Louis and Andral, in the hospitals of Paris; and 29 are recorded in the splendid work of Annesley, on the diseases of India. In my remarks I shall make frequent reference to the facts expressed in these tables.

In the list of causes capable of exciting suppurative inflammation of the liver, I shall place first—

1. A blow, or other mechanical injury. This, although the most obvious cause—the cause most readily discovered—is by no means a frequent one. Among the cases exhibited in the tables there is only one, a case recorded by Andral, in which the disease of the liver could be clearly traced to a blow. In this case there were two abscesses, of large size, and seated, as I suppose is usual in abscesses produced in this way, on the convex surface of the right lobe.

The rarity of inflammation and abscess from accidental injury shews how effectually the liver, when of its natural size, is shielded by the ribs.

2. A second, and far more frequent cause of abscess of the liver, is suppurative inflammation of some vein, and the consequent contamination of the blood by pus.

Very soon after morbid anatomy began to be studied, it was discovered that in persons who die some days after a severe injury or surgical operation, collections of pus are often found in the lungs, the liver, the joints, between the muscles, and in various other parts of the body. These collections of pus form very rapidly—in some cases, in three or four days—and often with very slight local symptoms; and when occurring in the lung are strictly circumscribed, or immediately surrounded by perfectly healthy pulmonary tissue.

These circumstances suggested the notion, at one time generally received, and still held by some eminent pathologists, that the pus is not formed by a process of inflammation in the parts in which we find it, but that, having entered the circulation from the original seat of injury, it is merely *deposited* in those parts. The abscesses found in the lungs and liver in such cases have, in consequence, been very generally spoken of as *deposits* of pus.

An examination of pus through the microscope is sufficient to show that it cannot be deposited in the way supposed. Pus-globules are larger than blood-globules—according to some anatomists, twice as large—they could not then escape from the vessels without the blood-globules escaping as well. This circumstance is, perhaps, of itself, sufficient proof that the pus of those scattered abscesses is not simply *deposited* from the blood, but that it is formed, as in other cases, by a process of inflammation in the parts in which we find it.

Other and more conclusive evidence on this point has been furnished by the researches of MM. Dance and Cruveilhier. They have shewn that, although in most of such cases we find in the lungs fully-formed abscesses immediately surrounded by pulmonary tissue perfectly healthy, yet in other cases, in which death happens

earlier, instead of abscesses, we find small, circumscribed, indurated, or hepatised masses. In some instances the abscesses are formed in succession, so that in the same lung (as you see in this diagram, which I have had made from one of the plates of Cruveilhier) we find all intermediate stages between commencing induration, or hepatisation, of a small circumscribed portion of the pulmonary tissue, and a small circumscribed abscess. This circumstance did not escape the observation of Morgagni. Speaking of abscesses of the same kind that result from injuries of the head, he says—

"Fac enim relegas quas tibi novissimè descripsi, Valsalvæ observationes. Nempe tubercula plerumque invenies sive in pulmonibus, sive in ipso etiam jecore non omnia fuisse suppurata, quin plura interdum glandulosi corporis firmitudinem adhuc referentia. Quid? Si ægro moriente, necdum ulla essent quæ pus habere inciperent."

And his sagacity led him from this very near to what at present seems to be the true mode of formation of these abscesses. His words are—

"Videtur autem secundum eas observationes, quibuscum, ut puto, Molinellii conjungi potest observatio, pus in viscera aliunde invectum, non puris forma semper deponi, sed haud raro saltem nonnullas ejus particulas cum sanguine permistas, et prorsus disjunctas, in angustiis quibusdam, fortasse glandularum lymphaticarum, hærere, easque, ut in venereorum bubonum productione fit, obstruendo, aut irritando, eoque humores præterituros retinendo distendere, et multo copiosoris quam quod advectum est, puris generationi, a rigoribus illis, et horroribus significatæ, causam præbere. Qua ratione illud quoque intelligitur, quomodo multo plus puris in visceribus, et caveis corporis sæpe deprehendatur, quam modicum vulnus dare potuisset."

His doctrine, then, is, that pus carried to the viscera from distant parts, is not always deposited as pus, but that often some of its globules become arrested in the narrow channels of the body, and there, by obstruction or irritation, cause congestion, and give occasion to the formation of a much greater quantity of pus than was brought there by the blood.

The mode of formation of these abscesses is well illustrated by an experiment made by Dr. Saunders, and related by him, exactly half a century ago, in his Gulstonian lectures in this place.

He injected ʒij. of quicksilver into the crural vein of a dog. No ill effects were observed the first day; but at the end of this the dog became feverish, and after two or three days had cough and difficulty of breathing, which continued until its death. On examination after death, Dr. Saunders found the lungs studded with small indurated masses, which he calls tubercles, and small circumscribed abscesses. In the centre of each was a small globule of mercury.

Here, the globules of mercury, like the globules of pus in purulent phlebitis, became arrested in the capillary vessels of the lungs, and each globule, acting, perhaps, by mere mechanical irritation, excited circumscribed inflammation and abscess. The inflammation was circumscribed, because the irritation that excited it acted only at particular points.

In the dog experimented on by Dr. Saunders, the lungs were the only organs in which abscesses were found. The reason of this is obvious: all the mercury, conveyed directly to the lungs, became arrested in their capillaries. No globules passed through to cause inflammation and abscess of other organs.

In the same way, in some cases of purulent phlebitis, abscesses are found in the lungs only; and they are usually found in the lungs in greater number than in other internal organs. After the lungs, the liver is the organ in which they are most frequent—a circumstance to be attributed to the large size of the liver, to the great quantity of blood that flows to it, and perhaps still more to the slowness of the current through its capillary network.

In the liver the abscesses are often scattered, as in the lungs; but they are usually larger, and less regular in their outline, than in the latter organ—a consequence, it would seem, of the anatomical fact noticed by Mr. Bowman, that the lobules of the liver are not distinct bodies, separated from each other by a layer of cellular tissue, but that their capillaries form a continuous network throughout the entire organ.

For a long time it was strongly objected to the doctrine, that the disseminated abscesses consequent on injuries and operations are formed in the way here supposed, that in many such cases no inflamed vein can be found after death.

This objection was much weakened by the important observation made by Mr. Arnott, that the effects of purulent phlebitis are not in relation to the size of the vein, or to the extent of the portion inflamed; and that even in cases rapidly fatal the portion of vein inflamed is often very small. Mr. Arnott infers, and no doubt justly, that in many cases we fail to discover the source of the mischief on account of the small size of the vein or the small portion of it inflamed.

Another important observation has been made by Cruveilhier, which goes far to complete our knowledge of phlebitis, and almost entirely removes the objection I have stated: it is, that after operations or injuries where a bone has been divided or broken, the portion of vein inflamed, the source of the

subsequent mischief, is often within the bone. He maintains that operations and injuries that involve bones are those most frequently followed by disseminated abscesses; and that inflammation of the veins in the interior of bones is more apt to cause them than inflammation of the veins of other textures.

He accounts for this by the circumstance that the vascular canals of bone cannot collapse like the vessels of other textures; and further supports his opinion by the following experiments:—

He removed the marrow from the thigh-bone of a dog, and put mercury in its place. At the end of four or five days the dog died, and the mercury was found disseminated through the lungs. Each globule was the centre of a small hepatised mass (*foyer d'inflammation.*)

In another dog he placed a single globule of mercury in the medullary cavity of the femur, and a month afterwards found it in the lungs, divided into many very small globules, each the centre of a small abscess.

The observation of Cruveilhier, that injuries which involve bones are those most frequently followed by disseminated abscesses, embraces, as a particular instance, the fact, long ago noticed, that injuries of the head are often followed by abscesses of the liver.

From the researches of Mr. Arnott, in this country, and of MM. Dance and Cruveilhier, in France, no doubt remains that the abscesses in such cases result from suppurative inflammation of a vein, either in the soft parts, or between the tables of the skull.

Many false theories of the mode of formation of the abscesses of the liver consequent on injuries of the head have been maintained under an erroneous impression, that the abscesses exist in the liver only. It was, however, long ago remarked by Morgagni, that in these cases there are often abscesses in the lungs, heart, spleen, and other organs, as well as in the liver. The abscesses of the liver attracted more attention than those of the lungs, on account, perhaps, of their larger size, and their being more conspicuous, from the stronger contrast between the colour of pus and the natural colour of the organ.

It may be considered, then, established, that the abscesses which form in the liver and other organs, after surgical operations and injuries, are owing to suppurative inflammation of a vein, and the consequent contamination of the blood by pus. The globules of pus, entering the circulation, are conveyed to the capillary vessels of the lungs, and, it would seem, by becoming mechanically arrested there, excite each circumscribed inflammation and abscess. If any of the globules pass through the capillaries of the lungs to the left side of the heart, they are sent in the arterial current to other organs, and becoming arrested in the capillaries of those organs, excite, as in the lungs, inflammation of limited extent, rapidly passing to abscess.

These dlsseminated abscesses are most commonly found after operations or injuries, because suppurative inflammation of a vein is most commonly caused by mechanical injury of its coats; but they may obviously result from suppurative phlebitis set up in any other way. I have met with two instances in which disseminated abscesses in various organs seemed to result from a collection of pus that had formed, from some cause which I could not discover, between the periosteum and bone of the upper arm; another instance, in which their source was probably a large tuberculous cavity in the lungs.

Perhaps, then, we are justified in concluding, in all cases in which we find collections of pus rapidly formed in different parts of the system, that the immediate cause of these scattered inflammations is some irritating substance conveyed there by the blood; and, in most of the cases where the abscesses in the lungs are small and circumscribed, that this irritating substance is pus, derived from inflammation of the inner surface of a vein.

The proportion of cases of this kind, in a given number of cases of abscess of the liver, will of course vary with the frequency of abscess of the liver from other causes.

In India, where other powerful causes of abscess of the liver are in operation, the proportion will be small. In the cases published by Annesley, there is not one that we can, from his description, place in this category. In the fifteen cases I observed at the Dreadnought, there is only one that clearly belongs to this head: in this instance, abscess of the liver, with abscesses of the lungs and collections of pus in various joints, resulted from phlebitis caused by the operation of bleeding.

In the fifteen cases collected by Louis and Andral, in Paris, where abscess of the liver from other causes is less frequent, there are four which may be placed in this category:—one, in which the abscesses were consequent on venesection; another, in which they were consequent on childbirth; a third, where, with abscesses of the liver, there was lobular pneumonia of the left lung, grey hepatisation of the right, and pus between the vertebral column and pharynx; a fourth, in which there was grey hepatisation of the lower lobe of the left lung, and pus in the mediastinum.

There is strong analogy between the disseminated abscesses from phlebitis and disseminated masses of cancer.

A cancer of the breast may be the source of cancerous tumors in the lungs and liver, just as an inflamed vein in the arm may be the source of abscesses in those parts.

The abscesses and the secondary cancerous tumors will be scattered in the same manner, and immediately surrounded by healthy pulmonary or hepatic tissue.

The lungs and the liver are the organs in which secondary cancerous tumors, as well as the abscesses from phlebitis, are most numerous.

The cancerous tumors and the abscesses have in each organ the same form and seat; and in the lungs both have a great predilection for the surface.

These points of resemblance depend on the germs of the two diseases—cancer-cells and pus-globules—being disseminated in the same manner through the veins.

I have as yet alluded only to inflammation of a vein that returns its blood immediately to the vena cava, in which case the pus has to traverse the capillaries of the lungs before it can be sent to other organs. In such cases abscesses are sometimes found in the lungs only, and are always more numerous in them than in other organs. But if one of the veins that go to form the vena porta be inflamed, the pus will be carried to the liver first, and abscesses will be found solely, or in greatest number, in that organ.

Cruveilhier found that if mercury be injected into one of the veins that feed the porta, it will be arrested in its course through the liver, and will cause circumscribed abscesses there, just as it does in the lungs when injected into the crural vein.

He injected mercury into one of the mesenteric veins of a dog. At the end of twenty-four hours the dog died, and the surface of the liver was found sprinkled with small spots, of a deep red colour, which extended four or five lines into its substance. In the centre of each of these spots was a small globule of mercury.

In another instance, having met with a dog having an umbilical omental hernia, he seized the opportunity to inject mercury into one of the small veins of the omentum. The dog was killed in the middle of the third month, and the liver found studded with a countless number of what Cruveilhier calls tubercles, in the centre of each of which was a globule of mercury. Some of these tubercles had two distinct layers—the outer albuminous or tuberculous, the inner puriform.

In these two experiments we see the different stages of suppurative inflammation. At first there is a spot of a deep red colour; this passes to suppuration and abscess; and the matter of this abscess, acting as a source of irritation, excites around it inflammation of a different kind, which terminates in an effusion of albumen or fibrin, and thus forms a cyst for the matter.

The veins that feed the vena porta are little exposed to accidental injury, but some of their branches are divided in operations on the rectum and for strangulated hernia; and, as might have been anticipated, these operations are sometimes followed by abscess of the liver.

Cruveilhier gives a case where abscesses of the liver were immediately consequent on repeated attempts to return a prolapsed rectum. The patient, a man of sixty, had been subject to prolapsus many years. The bowel protruded at the first effort to empty it, but was usually returned without difficulty. When he sought assistance, it had been down twenty-four hours, and was replaced only after repeated and violent attempts, which gave him much pain. The same day the expression of his countenance altered, and his pulse became small and unequal. He soon fell into a state of prostration, with a cold skin, vomiting, hiccough, stupor, but without pain, and died on the fifth day. A great number of small abscesses,—some superficial, others deep-seated,—were found in the liver; the hepatic tissue, for a short distance round each of them, was of a brown slate-colour, and softened.

Dance mentions a case in which abscesses formed rapidly in the liver after an operation for cancer of the rectum, where cauterisation was practised; another, in which they were consequent on a simple operation for fistula; two others, in which they followed the operation for strangulated hernia, where a portion of irreducible omentum suppurated externally.

There can be little doubt that in all these cases the abscesses in the liver were the consequence of phlebitis caused by the operations.

It is an important circumstance, and one to which I shall again have to refer, that in none of the cases do Cruveilhier or Dance speak of abscesses in other organs. It would seem that all the pus furnished by the inflamed veins was arrested in its passage through the liver, and that abscesses formed in that organ only.

3. The consideration of these cases leads us naturally to a third cause—I believe by far the most frequent cause—of abscess of the liver;—I mean ulceration of the large intestine, or, more generally, of the intestines, the stomach, the gall-bladder, or ducts,—parts which return their blood into branches of the portal vein, to be thence transmitted through the capillaries of the liver.

A connexion between abscess of the liver and dysentery has long been noticed; but the two diseases are, I believe, associated far more frequently than is generally imagined.

Of the twenty-nine cases from Annesley, exhibited in the tables, there are twenty-one, or nearly three-fourths, in which there were ulcers, more or less extensive, in the large intestine; and two other cases in which the large intestine was contracted or strictured, in consequence, no doubt, of dysentery at some former period. It is not unlikely that in some of the remaining cases ulceration of the intestine existed, but was not noticed.

Of the fifteen cases which I examined at the Dreadnought, and which are arranged in this table, the state of the intestines was not noticed in two cases. In eight of the remaining thirteen cases there were ulcers in the large intestine, and in one other case two ulcers in the stomach: so that in nine of thirteen cases, or in nearly three-fourths, there were ulcers in the large intestine or stomach. In another of these cases, without any ulceration of the stomach or intestine, there was ulceration of the gall-duct.

In the fifteen cases collected by Andral and Louis, who seem not to have suspected any connexion between abscess of the liver and ulcerated intestine, ulcers are noticed in the large intestine, and in the lower end of the ileum, in two cases; in the lower end of the ileum only in one case; in the stomach in three cases; in the gall-bladder in one case.

In one of the cases in which the stomach was ulcerated, the ulcer communicated with the abscess, which was in the left lobe of the liver. It is fair to conclude, as Andral does, that in this case the ulcer was caused by the abscess opening into the stomach. Excluding this case, there are still six cases out of fifteen in which there were ulcers in some part of the extensive mucous surface that returns its blood to the portal vein.

The fact will appear still stronger, if we recollect that in one of these fifteen cases the abscess in the liver was caused by a blow, and in four others it seemed the consequence of phlebitis; and that in none of these five cases were there any ulcers in the stomach, intestines, or gall-bladder: so that in six out of ten cases, in which the abscesses were not the consequence of a blow or of general phlebitis, there was ulceration of the stomach, the small or large intestine, or the gall-bladder.

It is quite impossible to suppose that this is a mere coincidence of lesions having no relation to each other. In another of these ten cases, the abscess of the liver was obviously consequent on chronic disease of the stomach; and after death the lining membrane of the stomach was found in some parts so softened as to resemble liquid mucus. In this last case, and in the two cases in which there was an ulcer in the stomach, the state of the large intestine is not noticed.

Here, again, I may adduce, as a farther support to my position, the analogy of cancer. Cancer of the stomach is frequently followed by disseminated cancerous tumors in the liver, and in no other organ. I might cite numerous instances of this kind from those storehouses of pathology—the Clinique Médicale of Andral, and the Anatomie Pathologique of Cruveilhier. It would seem that cancer-cells, like pus-globules, usually, if not always, become arrested in the liver, and do not pass through to become the germs of cancerous tumors in other organs.

The association of dysentery with abscess of the liver is noticed by most physicians who have treated of those diseases. Dr. Cheyne, speaking of the dysentery of Ireland, says, that in the majority of his dissections the liver was apparently sound, but that in two cases he found abscesses in its substance.

In one or two of the cases of abscess of the liver published by Dr. Abercrombie, there were ulcers in the large intestine. It is remarkable that Dr. Abercrombie should have considered the association of the two diseases accidental. He says, "Dysentery is often accompanied by diseases of neighbouring organs, especially the liver, in which are found, in some cases, abscesses, and in the protracted cases chronic induration. These are to be regarded as accidental combinations, though they may considerably modify the symptoms."

Annesley, much struck with the frequent association of the two diseases, and impressed with the importance of establishing their true relation, confesses his inability to do this. He supposes that in some cases the abscess is consequent on the dysentery; that in others, the dysentery is the mere consequence of the disease of the liver; while in the third order of cases the disease of the liver and that of the large intestine are coeval, or so nearly coeval that it is almost impossible to decide which has priority. And, indeed, in India it must be extremely difficult to discover the relation between the two diseases, in consequence of the great prevalence of other affections of the liver that are not easily distinguished from abscess during the life of the patient.

In the cases that fell under my own care in the Dreadnought, I experienced the same difficulty, and generally found it impossible to tell, from the history of the case, which had priority, the disease of the liver or the dysentery.

In some cases, however, it was impossible to resist the conclusion, that the abscess of the liver was not only consequent on the dysentery, but caused by it.

On the 12th of March, 1838, four men, Brown, Flett, Crere, and Davies, were brought into the Dreadnought from the same vessel, the *Renown*, in a dreadful state

of dysentery. The *Renown* had just come from Calcutta, and had lost many of her crew from dysentery between Calcutta and the Cape. At the Cape, having but five men before the mast remaining, she shipped seven fresh hands, among whom were Brown, Flett, Davies, and Crere, at that time in perfect health. Some of the original crew continued to suffer from dysentery after leaving the Cape, but these new hands had good health until, between the Western Islands and the Channel, when they had got into cold weather, they were attacked, one after another, with dysentery of the most severe kind. Two of these men died soon after their admission to the Dreadnought; the others so far recovered as to leave the hospital.

In the two fatal cases I found the condition of the large intestine exactly the same —from the ileo-cæcal valve to the rectum, the mucous membrane was almost entirely destroyed by sloughing. In one of these cases, the liver contained three small abscesses, not encysted, and evidently quite recent; in the other, the liver, as far as I could judge, was perfectly healthy. Now the primary disease in the two cases was obviously the same, produced by the same cause; and as disease of the liver was only found in one of them, we must infer that it was secondary, the consequence of the dysentery.

Among many cases of dysentery, there may be only one in which abscesses form in the liver, just as among many cases of amputation, or of injury of the head, there may be only one in which abscesses form in the lungs and other organs.

In another case, No. 8 in the table, the patient had dysentery at the Isle of France. The violent symptoms subsided at the end of two months, and he continued his work for four years; until, while on his passage home from the East, diarrhœa recurred, and he became affected, for the first time, with pain in the right side and shoulder. These symptoms had lasted three months, when he was brought into the Dreadnought. He died soon afterwards, and on examination I found four large ulcers, three in the lower extremity of the ileum, and one in the cœcum; the neighbouring mesenteric glands much enlarged, and softened to a pulp, of a pinkish colour; and a superficial abscess on the convex surface of the right lobe of the liver. The mucous membrane of the small intestine down to the ulcers, and of the large intestine throughout, below the cœcum, was in all respects healthy.

The march of the disease in this case seemed to be dysentery, which had left a few chronic ulcers in the cœcum and lower end of the large intestine; at the end of four years, recurrence of dysenteric symptoms, inflammation and abscess of the liver. The abscess of the liver clearly dated from the recurrence of the dysenteric symptoms, when the patient first felt pain referrible to the liver. An abscess so superficial could not have existed without manifest symptoms.

If I had time, I might adduce other instances in which the abscesses of the liver were clearly secondary to dysentery. We are then led to the conclusion, admitted by Annesley, that abscess of the liver is in some cases consequent on dysentery, and obviously caused by it.

The question now arises,—is it not so caused in all the cases, or in most of the cases, in which the two diseases are associated?

Annesley thought not, from the circumstance that, in India, the symptoms of liver disease are sometimes coeval with those of dysentery, in other cases prior to them.

The circumstance that the symptoms of liver disease are coeval, or nearly coeval, with those of dysentery, does not prove that the former disease is not dependent on the latter. In the case I have cited from Cruveilhier, in which abscesses in the liver were caused by the rough handling of a prolapsed rectum, the symptoms commenced almost immediately after the injury, and, at the end of five days, when the man died, the matter in the abscesses was fully formed. After an amputation or injury, inflammation of a vein may occur, pass to suppuration, and contaminate the system, in less than forty-eight hours. Supposing, then, the suppurative inflammation of the liver to be excited in the same way in dysentery, we should expect that its symptoms would, in some cases, be almost coeval with those of the primary complaint.

But, in India, it sometimes happens that the symptoms of liver disease precede those of dysentery. This, also, is what might have been expected.

In India, derangements of the liver, consisting in excessive and perhaps vitiated secretion of bile and inflammation of the gall-ducts, are very common; the consequence, it would seem, of the heat of the climate, and the free living in which the English in India indulge.

Adhesive inflammation of the liver, terminating in induration and cirrhose, is also very common there, as in this country, from spirit drinking. Now, although neither of these affections may terminate in suppurative inflammation of the liver and abscess, yet they present nearly the same symptoms, and may be readily mistaken for it. If, then, a person with any such derangement of the liver should become affected with dysentery and its consequence, abscess of the liver, it is very natural that the dysentery should be ascribed to pre-existing suppurative inflammation of the liver.

If the explanation I have offered be rejected, we are driven to conclude, as Annesley does, that the dysentery in these last cases is caused by the passage of irritating bile. Now, if this were the case, we should expect to find the most evident marks of disease in the gall-ducts and the upper part of the small intestine—parts with which the irritating secretion came first in contact; but, instead of this, these parts are almost always perfectly healthy in cases in which abscess of the liver is associated with the most destructive forms of dysentery. The whole of the large intestine may be a complete slough, while the gall-bladder and ducts, and the small intestine, almost down, or even quite down, to the ileo-cœcal valve, are perfectly healthy, and the bile in the gall-bladder is of its natural consistence and colour.

There can be no doubt that a copious flow of irritating bile may cause diarrhœa—it may perhaps cause ulceration—but it is very improbable that it causes the early and extensive ulceration and gangrene of the large intestine in Asiatic dysentery, which often destroys life in a few days, while the small intestine almost in its entire length remains perfectly healthy.

The more probable explanation is that which I have before given—that in these cases the patient had some derangement of the functions of the liver, which was followed by dysentery and abscess; and, consequently, that in all the cases, or most of the cases, in which abscess of the liver and dysentery are associated, the former disease is the consequence of the latter.

If irritating bile causes ulceration of the intestine, it may be the remote cause of abscess of the liver, but only through the disorder it first occasions in the intestine.

Admitting dysentery, or ulceration of the bowel, to be a source of abscess of the liver, it is obvious that the liver does not become affected by spreading of the inflammation, but by some contamination of the portal blood.

This may be either by *pus*, formed by suppurative inflammation of one of the small intestinal veins; or by the fetid gaseous and liquid contents of the large intestine in dysentery, which must be absorbed and conveyed immediately to the liver. It is, I think, probable, that contamination of the former kind usually gives rise to small disseminated abscesses; of the latter, to diffuse inflammation, and a larger, perhaps single, collection of pus. If the morbid matter be such that it does not mix readily with the blood—as globules of pus or mercury—it will cause small circumscribed abscesses, the rest of the liver being healthy. If, on the contrary, the morbid matter be volatile, or readily diffusible in the blood, all the blood will be vitiated, and diffuse inflammation result.

The admission of this explanation of the relation of abscess of the liver to dysentery would lead us to expect that abscess of the liver might occasionally be consequent on ulceration or organic disease of the stomach or gall-bladder—parts which, like the large intestine, return their blood to the portal vein: and this is found to be the case.

I have already remarked, that in the fifteen cases of abscess of the liver recorded by Andral and Louis, there are two in which the stomach was found ulcerated, without any ulceration being noticed in the intestines or gall-bladder.

In the first of these two cases (Obs. 30, Andral), the patient, a man sixty years of age, had presented for a considerable time the symptoms of chronic gastritis—loss of appetite, vomiting, acid eructations, a sense of weight at the epigastrium. He became sallow, and lost strength and flesh. He was somewhat benefitted by milk diet and soothing measures, when, all at once, his pulse became frequent, he fell into a state of prostration, his tongue became brown, and he died at the end of some days.

The coats of the stomach, for the breadth of five or six fingers in front of the pylorus, were much thickened; the mucous membrane was ulcerated; and, in place of the subjacent tissues, there was a uniform gristly substance, of a dead white colour.

There was adhesion by bands of cellular tissue between the stomach and liver.

The liver was of its usual size. In the left lobe was a cavity, the size of a small apple, filled with pus, and lined by a thick and resisting membrane. The hepatic tissue surrounding the abscess was in a state of gangrene.

In this case, the abscess of the liver could not have caused the ulcer of the stomach; but the ulcer may fairly be presumed to have been the cause of the abscess. The abscess was chronic. The state of prostration marked the occurrence of gangrene about it.

In the second case (Obs. 4 of Louis), the patient, a man of fifty, had had for four years disorderered digestion, irregular appetite, occasional slight pains in the left hypochondrium, now and then nausea and purging, and often had alternating of leanness and moderate *embonpoint*. Seventeen days before his admission to the Hospital he became much worse than usual, and had a set of new symptoms—heat of skin, jaundice, complete loss of appetite, severe pain at the epigastrium and in the left hypochondrium, and slight oppression. The symptoms continued, and in the last eight days he had, in addition, purging and some nausea. He died a fortnight after his admission.

The liver was somewhat larger than natural, and contained a great number of small abscesses, bounded by a thin and soft false

membrane. Its tissue was softened throughout.

The gall-bladder was small, and obliterated at its neck. The cystic duct contained a gall-stone. The coats of the gall-bladder and cystic duct much indurated and thickened. The hepatic duct, and the ductus communis, perfectly healthy.

In the portion of the stomach intermediate to the splenic and pyloric extremities, the mucous membrane was thicker than natural, and presented many deep ulcers, three or four lines in breadth.

Here, as in the former case, we cannot ascribe the ulcers in the stomach to the disease of the liver, but the abscesses in the liver may be fairly attributed to the disease of the stomach. There was likewise, indeed, disease of the gall-bladder and cystic duct, but this, which was of long standing, presented no marks of recent activity, whereas it was obvious that the abscesses in the liver were of recent date.

In another case given by Andral, to which I have already alluded, an abscess of the liver seemed consequent on softening of the mucous membrane of the stomach. The patient, a man aged 51, had symptoms of chronic gastritis for 18 months, when he became jaundiced, and began to have a constant and troublesome pain in the right shoulder. After the accession of these last symptoms,—Andral does not say how long,—he was seized suddenly with symptoms of peritonitis, and died at the end of three days.

In the liver was an abscess, not encysted, which had opened into the cavity of the peritoneum on the under surface of the liver, near the gall-bladder. The gall-bladder and ducts were healthy. In the splenic extremity of the stomach, the mucous membrane was much softened, in some parts so much as to resemble liquid mucus on the subjacent tissue. In the pyloric extremities of the stomach, on the contrary, the mucous membrane was hypertrophied.

Here, symptoms of disease of the stomach had lasted 18 months before the patient had any symptoms of disease of the liver. The circumstance that the abscess was not encysted tends to prove that it was of recent date.

Ulceration of the gall-bladder or ducts seems equally efficient with ulceration of the stomach in causing abscess of the liver.

I would instance as a probable example of this, the last case given by M. Louis (Obs. 5, Louis). The liver contained from 30 to 40 abscesses, from the size of a pea to that of a filbert, not encysted, and evidently of recent date.

There was no ulceration of the stomach or intestines, but in the gall-bladder, which contained some small calculi, there were six round ulcers, three superficial and three deep. The mucous membrane of the gall-bladder was tripled in thickness.

A case very similar to this is given by Dr. Bright, in the first volume of Guy's Hospital Reports:—gall-stones, ulceration of the gall-bladder, numerous abscesses in the liver.

With these cases may be classed one of the cases I had to treat at the Dreadnought.

The patient, aged 33, was brought into the hospital on the 2d of December, immediately on his return from Quebec. At Quebec he had ague, and this was succeeded, three weeks before his admission, by jaundice and pain below the ensiform cartilage. He was given, first salines, then quinine, then iron. The jaundice continued, but he had gained strength, when, on the 26th of January, just eight weeks after he was brought into the hospital, he was seized suddenly with symptoms of peritonitis, which carried him off in four days.

On the convex surface of the right lobe of the liver was a large irregular abscess, lined by a yellow, buffy, false membrane. The gall-bladder, whose cavity was no larger than a hazel-nut, was filled by a yellow, ochery, matter, surrounding a firm dark-green nucleus. It was firmly adherent to the duodenum, and its coats were thickened. The cystic duct was much dilated, and contained a similar calculus, the size of a small bean. The common duct was nearly as large as my little finger, and communicated with the duodenum by an ulceration rather larger than a split pea, about two or three lines from the natural termination of the duct, which was very obvious as a papilla. The hepatic ducts were very large, and were readily traced a long distance into the liver.

There was no ulceration of the stomach, or of the intestines, with the exception of this ulcerated opening in the duodenum.

In the 29 cases from Annesley, which I have exhibited in the tables, there are, as I have already remarked, 23 in which there were ulcers, or the cicatrices of ulcers, in the large intestines. In 4 only of these 23 cases does Annesley notice any morbid change in the gall-ducts; while he remarks it in 3 of the remaining 6 cases.

In 1 of these 3 cases, (case 81) the gall-bladder was very small, and seemed to be divided by a stricture in the centre.

In another, (case 93) the common duct was much compressed and obstructed by enlargement and hardening of the pancreas, which completely enveloped it. On laying the ducts open, there was found at the mouth of the gall bladder a considerable thickening and cartilaginous band constricting this part. The intestines, small and large, were sound, both internally and externally.

In the 3d case, (case 126) the gall-bladder completely adhered to the walls of the abscess, and communicated with it. The

ducts were impervious, being involved in the adhesive inflammation of the parts forming the parietes of the abscess; and the bile secreted by the liver was either retained in the abscess, or discharged by the wound. (The abscess had been opened). There was no other appearance of disease in any of the viscera.

The ducts, the gall-bladder, and the capsule of the liver, are nourished by the hepatic artery, and blood flows, not from the portal vein to them, but from them to the portal vein. This circumstance explains how ulceration of the gall-bladder, like that of the stomach or intestines, may cause abscess of the liver; and it also explains the fact, noticed by most men who have seen much of abscess of the liver, that in this disease the gall-bladder, ducts, and capsule, are rarely affected. The suppurative inflammation is confined to those parts of the liver that receive blood from the portal vein. The frequent absence of any trace of inflammation of the capsule in cases of abscess of the liver has been expressly noticed by Annesley and by Dr. Stokes as very important in reference to treatment.

Having collected instances of abscess of the liver apparently originating in a vitiated state of the blood brought from the mucous surfaces that feed the portal vein, we require, to complete our catalogue of abscesses of the liver produced by contamination of the portal blood, instances in which the contaminating matter is brought by the splenic vein. My friend, Mr. Busk, has furnished me with notes of the appearances after death in a case which seems to have been of this kind.

The liver contained a great number of abscesses, about the size of walnuts, containing thick white pus. The intermediate hepatic substance did not seem inflamed. It was pale, firm, and of natural appearance.

The splenic vein was much dilated. The branches by which it arises from the spleen, and all that part of it which runs on the pancreas, were inflamed, and contained a puriform fluid and an irregular deposit of lymph.

A large portion of the spleen was pale, and partially separated by a gangrenous mass from the rest of the organ, which was of a deep red colour and very soft.

There were no ulcers in the intestines; no abscesses anywhere but in the liver.

The most probable supposition is, that the disease in this case originated in the spleen; that the splenic vein subsequently became inflamed, and that the disseminated abscesses in the liver were caused by the noxious matter brought to it by the vein. If this matter were pus, we have another instance of pus brought in large quantity to the portal vein being all arrested in its passage through the liver.

A circumstance that cannot fail to have struck you as strongly confirmatory of the view I have taken of the different sources of abscess of the liver in the cases I have brought before you, is, that you do not find more than one of these probable sources in the same subject. Where the abscess could be traced to a blow, or to suppurative inflammation of some vein that returns its blood immediately to the vena cava, there were no ulcers in the stomach, intestines, gall-bladder, or ducts. When ulcers were found in the intestines by which the occurrence of abscess in the liver could be explained, there were no ulcers in the stomach or gall-bladder. When the stomach was ulcerated, there were no ulcers in the intestines, or in the passages of the bile. When there were ulcers in the gall-bladder or ducts, there were none in any par of the intestinal canal.

It is not, however, every form of ulceration of the stomach and intestine that gives rise to abscess of the liver. I have never seen abscess of the liver noticed in conjunction with simple ulcer of the stomach, or with ulcerated intestine in typhoid fever. This last fact is very striking, when we consider how prevalent and fatal typhoid fever is, how generally it is attended with extensive ulceration of the bowels, and how attentively all the morbid appearances in this disease have been observed and recorded of late years, in this country and in France.

Abscess of the liver is not noticed in any of the cases (ten in number) of ulceration of the duodenum after burns, given by Mr. Curling in his paper in the Medical and Chirurgical Transactions for 1842.

It is very rare in conjunction with ulceration of the intestine, in phthisis. In two of the cases given by Andral in which abscess of the liver was associated with ulceration of the intestines, there were tubercles in the lungs, and the ulcers were probably of tuberculous origin. But these form an insignificant proportion in the immense number of fatal cases of phthisis with ulcerated intestines, in which the morbid appearances have been observed and recorded.

Abscess of the liver seems to occur chiefly in conjunction with the sloughing ulceration in acute dysentery; and with chronic ulcers attended with thickening and induration of the submucous cellular tissue. In the latter cases, the inflammation of the liver occurs on some exacerbation of the gastric or dysenteric symptoms.

The explanation I have given of the mode of production of abscesses of the liver associated with dysentery, applies to a large proportion of the cases not attributable to the causes I have previously noticed; blows on the side, and suppurative phlebitis. There remain, therefore, but few cases that

require us to admit the agency of other causes.

Yet various other influences are very confidently assigned as causes of suppurative hepatitis. Among these I may mention—

1. Inflammation of the duodenum.

Great importance was attached to this cause by Broussais and his followers. Broussais, having noticed that the lymphatic glands in the vicinity of ulcerated mucous membranes are often enlarged and inflamed, and dwelling on the known sympathy between some secreting glands—the lachrymal, the salivary—and the adjacent mucous membranes, was led to generalise, and to assign inflammation of the duodenum as the most frequent cause, indeed as almost the only cause, of inflammation of the liver. This opinion is not borne out by facts. In the tables exhibiting the cases collected by Andral and Louis, and those observed by myself, the condition of the duodenum is noticed in a separate column. In hardly one did it present any trace of disease. Ulceration or organic disease of the duodenum may cause abscess of the liver, like similar disease of other parts which transmit their blood to the portal vein, but such disease is very rare in the duodenum.

2. Another cause assigned for hepatitis is the drinking freely of spirits. But this produces adhesive inflammation and induration of the liver, not suppurative inflammation and abscess. Notwithstanding the habit of gin-drinking by the lower orders in this metropolis, years often pass away without a single case of abscess of the liver being admitted into a large London hospital. Not one has been received into King's College Hospital since its establishment.

3. A third cause confidently assigned by Annesley, and many other writers, is congestion of the liver; but this, assuredly—that is, mechanical congestion—never produces suppurative inflammation. We never meet with abscesses of the liver as a consequence of the congestion caused by the organic diseases of the heart so common in our hospitals; and in not one of the cases exhibited in the tables could the abscesses be attributed to this cause.

4. In India great influence is attributed to the heat of the climate as a cause of inflammation and abscess of the liver. A high temperature, no doubt, deranges the functions of the liver, and causes increased secretion of bile and inflammation of the gall-ducts. It may perhaps also directly cause suppurative inflammation and abscess; but I feel persuaded that it does so far less frequently than is generally imagined, and that the notion originated from the prevalence of *dysentery*, the most frequent cause of abscess, in many tropical climates. The heat of our own summers, or of those of France, never brings on abscess of the liver, which is very rare in the civil hospitals of London and Paris. Sailors employed in the trade to the west coast of Africa are exposed to heat just as great as those in the trade to India, and suffer much more in health, but they are not equally liable to abscess of the liver.

Men employed in japanning, and other processes of the arts, are often exposed, and for a considerable time, to heat much greater than that of India, and their health suffers in consequence, yet we never find them coming into our hospitals with abscess of the liver.

5. Another cause brought forward to explain the frequency of abscess of the liver in India is remittent and intermittent fever; but I believe this has no influence except by producing ulceration of the bowels.

During the time I was visiting physician to the Dreadnought, I had continually to treat men in the most deplorable condition from fever caught on the coast of Africa, but none of these men had abscess of the liver.

Dr. M'William, the chief surgeon to the late unfortunate Niger expedition, tells me that he did not find abscess of the liver in any of the examinations he made (they were very few in number) of the victims of the malarious fever of the climate.

Louis, in his elaborate account of the yellow fever, which he was sent by the French government to observe at Gibraltar in 1828, says he constantly found the liver of a pale slate colour from anemia, but presenting no marks of inflammation.

Annesley, indeed, notices abscesses in the liver among the morbid appearances of the remittent fever of India, but he also notices ulceration of the intestine. Sir Gilbert Blane, in his account of the Walcheren fever, remarks that the liver was occasionally the seat of abscess; but here, as in India, the fever was associated with dysentery. It is, I think, fair to conclude that, in both cases, the abscesses in the liver were the consequence of the dysentery, and not the immediate effects of the fever.

MR. LEE ON BELGIAN MEDICAL INSTITUTIONS.

(For the London Medical Gazette.)

Ghent.—The building of the university is one of the finest of the kind in Europe. Its handsome façade, lofty portico, spacious circular vestibule, with marble staircase on either side, will not fail to strike the visitor. The amphitheatre for examinations and promotions, capable of containing nearly 1000 spectators, with its stuccoed

columns, royal box, and tasty fittings-up, presents a rich appearance, and is occasionally used for other than university purposes. Each faculty has its separate class lecture-rooms on the ground floor, all the lectures being delivered by the professors within the building. There is a museum of natural history, and a cabinet of pathological anatomy, which, however, is but indifferently furnished, and contains nothing remarkable.

The number of students is about 500, of which one-third attend the medical classes. The following are professors in the Faculty of Medicine:—Dean, and Professor of Descriptive and Pathological Anatomy, M. A. Burggraeve. Human and Comparative Physiology, Guislain. Pathology and Therapeutics, Van Coetseur and De Block. Pharmacy and Materia Medica, Hensmans. Surgical Pathology and Clinique, Verbeeck. Obstetrics, Hondet. Ophthalmology, Roosbroeck. Medical Jurisprudence, De Block. Surgical Clinique, Kluyskens. Medical Clinique, Van Coetsan. There are also special courses of lectures on diseases of the skin, bandages, and instruments, &c. delivered by extraordinary professors and agregés.

The civil hospital is an ancient building, having the appearance of an unfinished church, of which the lofty roof, supported by bare rafters, presents a comfortless aspect; walls, about eight feet high, extending the whole length, form a central passage, on either side of which the beds are ranged in triple rows—the men on one side, the women on the other; the clinical cases being placed in the centre row. The whole number of beds is about 300; they are of iron, without curtains. The surgical wards are at the end, in the chapel, and contain about fifty beds each. At the time of my visit, the professor was absent, and there were no cases of particular interest. The most frequent disease admitted into the medical department are phthisis, bronchial inflammation, diseases of the heart, gastro-enteritic irritation, and diseases of the kidneys, which are very prevalent in many parts of Belgium. Among the patients was a female, of about 22 years of age, who, in consequence of an attempt at rape, had lost the use of her lower extremities, and had not had any evacuation of the bowels for four months, notwithstanding active medicines, as croton oil, had been given, as also two ounces of crude quicksilver. Neither had she taken any nourishment for more than three weeks. When anything was introduced into the stomach, it produced vomiting. There likewise seemed to be a total cessation of the secretion of urine, as, though closely observed, she was never observed to pass any, the utensil being always empty; and on the introduction of a catheter but a very small quantity was evacuated. She laboured under constant hiccough. The patient was of an obtuse appearance, and the practitioner, who brought her into the hospital in order that the case might be more closely watched, had no reason to suspect any deception, against which he had taken all possible precaution.

Surgical operations are not of frequent occurrence; stone is very rarely met with; and diseases of the eyes are much less frequent at Ghent than at Brussels. Sentin's method of treating fractures is only employed in some cases. The syphilitic wards contain twenty beds. The solution of Van Swieten, and the proto-ioduret of mercury, are the remedies mostly had recourse to in these cases.

Adjoining the civil hospital is the Hospice de la Maternité.

The institution for the insane, consisting of two compartments, at a distance the one from the other, contains about 400 patients. Its organization has been greatly ameliorated within the last few years, under the superintendence of M. Guislain, so that it may now rank among the first of these institutions upon the Continent. The women's department is built round three court-yards, planted with trees; the gallery on the first floor, upon which many of the rooms open, overlooking the court, is guarded by wooden railing, extending to the roof, so that the patients may walk about without danger. Each of these rooms contains three beds. Many of the patients, however, sleep in wards containing from twelve to twenty beds. About 150 assemble at dinner, the greatest order prevailing. After a prayer, and during the repast, passages are read from instructive books by a sister of charity. The number of these sisters is eighteen, and to their soothing influences may be ascribed much of the tran-

quilliity and order that reigns. The majority of the patients are separated from the turbulent, or those dirty in their persons, but there are no separate divisions according to the nature of the insanity. All are clothed in dresses belonging to the establishment, which, however, are not of a uniform colour. The most common means of repression are the *camisole*, and a belt passing round the body enclosing the arms, but leaving the hands free. The paralytic, and dirty patients, are confined on a chair (the latter on a *chaise percie,)* during the great part of the day, the hands resting on a wooden case. There are two or three work-rooms where several of the patients are occupied. Some convenient cells on the ground floor have been latterly constructed for the unruly, by the direction of M. Guislain. The look-out is upon the garden. Each cell has a clean bed, and two or three necessary articles of furniture; a window furnished with iron bars, and a door opening into a vestibule from which the air in cold weather is excluded by half-glass doors, so that the patient can see what is going on outside. In the vestibule is a stove in winter, and a bed for the superintendents. Some patients, above indigence, contribute partly to their support; there is likewise a separate division for about thirty patients of the superior order of society. Each room is clean, neatly, some even handsomely furnished, and there is a pretty garden for out-door exercise. The payment averages from six to eight hundred or a thousand francs annually. Some, however, pay double this sum, for which they have superior accommodation and attendance.

Mental alienation is not so prevalent among the higher ranks in Belgium as in France. During the political disturbances here as elsewhere the number of insane was greatly increased. The most common causes are domestic chagrin, losses, and other painful moral influences.

The department for the male sex is not so well organised as the female; the locale does not present the same advantages, and there is a comparative deficiency of space for exercise. In the treatment of maniacal exaltation, M. Guislain employs tepid baths, but rarely the douche, sedative remedies, or the abstraction of blood. He speaks highly of the effect of nauseants; as, antimony, and the sulphate of copper in half-grain doses, in some cases. He has also derived advantage in a few instances from the application of the actual cautery to the nape, which in one case entirely removed the maniacal excitement. It was likewise productive of benefit in a case of epilepsy.

The following is a *resumé* of M. Guislain's opinions upon mental diseases, as given in his work (Traité sur les Phrenopathics).

"Abstraction being made of those alterations resulting from mechanical lesion, congenital defect, or which present themselves in the course of acute diseases, the doctrine of mental diseases may be defined in the following manner.

"Almost unknown among nations in a primitive state, and savages, mental alienation shews itself and is multiplied in the very centre of civilization, where constantly succeeding desires and wants are continually in opposition with, and shocking each other.

"An anomaly of the social link which renders existence agreeable, and often at the same time painful to us, it has in the great majority of cases its source in the agencies which interfere with our moral happiness or our interests; sometimes in an intellectual impressionability; an idiosyncrasy transmitted by parents; more rarely in organic defects of the brain; in disorders of the thoracic or abdominal viscera; in morbid alterations of the cutaneous system; occasionally in debilitating causes, and deleterious substances, placed in contact with our textures.

"An affection which, when not arising from a congenital defect of organization, announces a lesion of the affective sensibility, first expressed by a feeling of affliction of melancholy, to which often succeed efforts of repulsion in the instinctive and perfectible qualities, characterised by irregular acts of the will, and vagaries of the imagination.

"A disease of which the primitive character frequently preserves the condition of individuality; sometimes presenting itself associated with phenomena of intellectual reaction or exhaustion, or concealed in some cases, on the appearance of these phenomena, and often presenting itself afresh at the period of convalescence.

"A periodical affection in a great number of cases, generally intermitting at the commencement, passing into the continued remittent state: again acquiring, during its declining period, the remittent, intermittent, or periodical type.

"A chronic disease which, in the greatest number of cases, terminates either in a return to the normal state, or by a diminution in the functional expression of the brain, depending or not upon an organic and secondary alteration of this viscus; the most constant seat of which alteration is in the excentric, lateral, and superior regions of the cerebral hemispheres: an affection giving rise to sympathetic lesions of other organs, especially those of respiration and digestion.

"Mental alienation belongs to the class of the painful neuroses: primitively it is a phrenalgia.

"We have described the different forms under which mental disorders *(souffrances du moral)* appear, by the generic name phrenopathics."

Thus it will be seen that M. Guislain, together with Esquirol, and others who have had extensive experience upon the subject, considers mental alienation as not depending, in the majority of instances, upon any organic or physical change of texture, with which it is not unfrequently accidentally complicated, or which arises as a consequence. This view is further corroborated by the success of the moral treatment in a large proportion of cases, as exemplified of late in several establishments.

PRACTICAL OBSERVATIONS, WITH ILLUSTRATIVE CASES, ON THE

THERAPEUTIC PROPERTIES OF SEVERAL MEDICINES.

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(For the London Medical Gazette.)

[Continued from p. 16.]

THE EXTRACT OF MONESIA.

Monesia is imported from South America into France. It is obtained as a crude extract from the bark of a tree supposed to be a *chrysophyllum*. Several preparations have been made from this vegetable substance, but that which I have used is the aqueous extract prepared by MM. Pelletier and Barthemoy. It is of a deep brownish-red colour, very friable, and perfectly soluble in water: its taste is, at first, sweet, and then astringent, leaving a permanent impression on the fauces. In doses of from five to eight grains, three or four times a day, I have never known it produce any unpleasant symptoms, or at all irritate the stomach. Its medicinal properties appear to me to be very analogous to those of catechu or kino, nor have I discovered it to possess any conspicuous superiority over those two pharmacopœial preparations. The cases in which I have prescribed it have been different kinds of diarrhœa. In them it has never failed to exercise an agreeable, safe, and uniform astringency over the intestinal exhalants. When administered in cases where there was leucorrhœa coexistent with diarrhœa, it has not appeared to exert any influence over the former complaint, though the latter was obedient to its action.

My exhibition of this extract has been exclusively confined to its internal use, though it is said that the form of injection has been found the most advantageous mode of administering it in vaginal and uterine diseases.

Case I.—Mr. B——, æt. 30; robust, of a healthy look and choleric temperament, consulted me on the 25th of March, 1843. He was suffering from chronic bronchitis attended with diarrhœa. To the latter complaint he had been more or less liable for three months, but had been much distressed during the last ten days by its aggravation.

℞ Misturæ Cascarillæ Comp. ℥iv.; Decocti Scoparii Comp. ℥v.; Spiritus Juniperi Comp. ℥ss.; Potassæ Acetatis, ℥ss.; Extracte Monesiæ, ℈ij. M. capiat coch. ij. majora ter de die. Vesicatorium sterno admovendum.

April 12th.—He felt himself so much improved, his bowels being regular and his cough greatly relieved, that he considered it unnecessary to take any more medicine.

Case II.—Isabella Wilson, æt. 30, a light complexioned, delicately formed, scrofulous looking woman, became my patient at the hospital on the 18th of March last. She was consumptive, with

considerable excavations in the upper and posterior part of the right lung. According to her own calculation she was about five months advanced in pregnancy. She had had diarrhœa for three or four months past, and it was a relief from this complaint which she sought.

The following mixture was ordered—

℞ Mist. Cascarillæ Comp. ʒiv.; Infusi Digitalis, ʒiij.; Træ. Gentianæ Comp. ʒj.; Extracti Monesiæ, ϑij. M. capiat coch. duo majora ter de die.

March 20th.—The looseness completely arrested.

In usu misturæ perstet.

She did not return to report herself; therefore it is presumed that she had no recurrence of the diarrhœa.

Case III.—T. H——, Esq. whose case has been adduced in evidence of the unsatisfactory benefit (Case IV.) derived from the administration of mattico in diarrhœa, began on the 8th of April last to take the subjoined mixture.

℞ Extracti Monesiæ, ʒj.; Infusi Caryophylli, ʒxss.; Træ. Gentianæ Comp. ʒiss.; Confect. Aromaticæ, ʒss. M. capiat coch. ij. majora ter de die.

On the 30th of April, he wrote thus:—"Your last prescription, containing the extract of monesia, has been decidedly beneficial. I continued it with your dietetic directions for ten days, when I found my bowels in such a satisfactory state, that I gave up taking it. If any relapse takes place I will have recourse to the same mixture again." When I saw him in August last, he told me that his bowels were quite natural. The quantity taken by this patient altogether was two drachms.

Case IV.—Miss H. Preston, æt. 32, of a dark complexion, delicate figure, melancholic temperament, and unhealthy look, consulted me on the 6th of April, 1843. She had had diarrhœa with varied intermissions for twelve months. She had been treated by alterative and absorbent medicine with occasional, but no permanent relief. The following pills, with injunctions to pay strict attention to diet and exercise, were prescribed.

℞ Fellis Bovis Inspissati, ʒss.; Extracti Monesiæ, ʒiss.; Creasoti, ℥iv. M. ut fiant massa in pilulas, xxiv. divid. quarum, ij. ter de die capiendæ.

A week's perseverance in this treatment was attended by considerable improvement in the state of the bowels. By the expiration of a fortnight she was quite well.

Case V.—Mary Harrison, æt. 37, a debiliated delicate looking woman, of a melancholic temperament, scrofulous diathesis, and hysteric disposition, came under my care on the 3d of April last. She was then suckling a child of 22 months old, and was labouring under the effects of this protracted lactation; leucorrhœa and diarrhœa being the most distressing symptoms. Her bowels were frequently relaxed during the day, and had been in that state for some months. She was directed to wean her child, to improve her diet, and to take the following mixture.

℞ Decocti Aloes Comp. ʒiij.; Infus. Valerianæ, ʒiv.; Træ. Valerianæ Ammon. ʒv.; Træ. Cantharidis, ʒj.; Træ. Secalis Cornuti, ʒij.; Extracti Monesiæ, ϑij. M. capiat coch. duo majora ter de die.

April 10th.—No appreciable improvement.

Misturam Ammonio Tartr. Ferri, ʒj. adde.

20th.—The bowels were regular; but no diminution of the leucorrhœa.

Case VI.—Mrs. W——, æt. 37, a dark haired, sallow complexioned, bilious looking female, of a melancholic temperament and inactive habits, consulted me on the 27th of April, 1843. She had had diarrhœa for a week previously, but during the last two days had been much indisposed by somewhat of a dysenteric affection. For a considerable period she had suffered from leucorrhœa. She had taken no medicines except a dose of castor oil.

With the exclusive use of ox tail or gravy soups as a diet, the following mixture was prescribed—

℞ Extracti Monesiæ, ʒj.; Infusi Caryophylli, ʒviiss.; Spiritûs Myristicæ, ʒss. M. capiat coch. ij. majora ter de die.

May 2d.—Her bowels were much alleviated; but still the bowels were unnaturally frequent.

8th.—The diarrhœa had entirely subsided; the leucorrhœa had suffered no diminution.

[To be continued.]

REMOVAL OF DROPSICAL OVARIA, ENTIRE,

BY THE LARGE ABDOMINAL SECTION.

By D. Henry Walne, Esq.

(*For the London Medical Gazette.*)

THIRD CASE.

On the 27th of June, 1843, a young lady from the country, accompanied by her mother, called on me, bringing a note from Dr. John Elliotson, whom she had that morning consulted respecting an abdominal enlargement, which had for some time past been a source of anxiety to herself and her friends. Dr. Elliotson having ascertained the presence of dropsical disease of one of the ovaries, and the result of his extensive experience being a conviction of the inefficacy of medicine in the treatment of that malady, had "at once told her not to be tapped, nor to take medicine likely to weaken or even annoy her," and advised her to put herself under my care, if I were willing to operate upon her. Being well acquainted with my "success in operating on the ovarium," he seems to have "regarded it as a duty" to advise her to become my patient, provided neither she nor I objected to the operation. Having perused the note, not without some admiration of the manly frankness by which it was characterized, I proceeded to investigate the case of Miss A. K., who had not quite completed her twentieth year.

More than four years ago it had been observed that she was larger in her person than was natural; so much so, that the mistress of the school at which she was then a pupil had written to her mother, intimating that something was wrong in her state which gave her a very matronly appearance. She herself is of opinion that at a much earlier date she had been unnaturally large, and believes that her complaint originated in an attack of inflammation, for which leeches had to be applied to the abdomen, when about eleven years of age.

Having left school at Midsummer, 1839, she became a governess in a private family; but towards the end of the year her size excited so much observation, and caused so many unpleasant remarks on the part of persons who did not know it to be the effect of disease, that she was obliged to return home. A professional opinion was in consequence taken, and she was pronounced to have ovarian dropsy.

From the time at which the nature of her case became known she underwent various courses of medical treatment prescribed by experienced practitioners. Mercurial alteratives, repeated emetics, an ointment rubbed upon the skin of the abdomen till it produced an appearance like erysipelas, and a variety of other remedies, were duly tried, but her size continued to increase gradually, no benefit whatever being derived from any of the means employed. For six months before she applied to Dr. Elliotson, with the exception of a short trial of garlick in gin, and broom tea, which some friends recommended, and which were of no service, all medicines had been discontinued.

She began to menstruate in her 14th year, was quite regular in that respect from the first, and always continued so, never experiencing any material suffering or inconvenience on those occasions. At about fifteen she went through a fever, but was never again affected by abdominal inflammation from the time of the illness which occurred when she was not more than eleven years old.

On examination I found the abdomen as prominent as at the full period of pregnancy, with greater fulness towards the loins. The tumefaction was circumscribed, very regular, and distinctly fluctuating; the health in all respects good; not the slightest sign of general dropsy present, and the uterus perfectly natural. I could find no circumstance to create a suspicion of the existence of adhesions; and she had never been tapped. Though of a tall, rather slim general figure, and thin in person, she measured forty inches in circumference.

Having informed Dr. Elliotson that I considered the case suitable for operation, but that, before arranging for its performance, if the patient and her friends agreed to have it done, I should wish Dr. Blundell's opinion should be taken, and this proposition receiving his approval, the result of our conference was declared. The young lady herself was very prompt in decision, being determined to submit to any operation rather than continue the

subject of such annoyances as her disease occasioned. Her friends were more deliberate, and received much contradictory advice. In August the matter was so far settled that Dr. Blundell was consulted, and his opinion, after careful investigation, found to be favourable. By this time also I perceived that, from whatever cause, she was sensibly losing flesh, whilst her complaint was as evidently gaining ground. Three-quarters of an inch additional abdominal circumference, with a thinner state of her general person, were plain intimations of the advance of mischief; and already her size was such as indicated a diseased ovary of much greater magnitude than had been met with in either of my previous operations. I therefore drew attention to these circumstances, and suggested that further delay would add to the hazard of the operation.

On the 29th of August she took up her abode in excellent quarters, with a prospect of the best nursing, and the most kindly discreet management of every thing relating to the coming occasion. Her menstruation had continued to be quite regular up to this time, and her last period had concluded on Friday the 18th.

It was my purpose to operate on Friday the 1st of September. In the meantime she was subjected to similar preparation as my two former patients, viz. abstinence from meat, and wine or other stimulating beverage. She also took aperient medicine of a mild description several times; but being young, and, as I conceived, on that account more likely to be the subject of inflammatory attack after the operation, I thought it prudent to take eight ounces of blood from her arm on the day previous to the one fixed for its performance. She bore the bleeding well, not being at all faint. Once, indeed, some hours after, she felt a slight giddiness. Two nights in succession she had taken, as her bowels were not very freely moved by the first dose, the following pills.

℞ Ext. Colocynth. c. grs. viii.; Hyoscyam., grs. v.; Pulv. Antim. grs. ij. M. et div. in pil. iij. h. s. sumend.

To-day, August 31, they had operated thrice copiously.

They were directed again, omitting the antimony. Her buoyant animation and activity were scarcely repressible by these means, by injunctions of quiet or the expectation of the operation.

Sept. 1st.—It was intended that the operation should be performed to-day, and the skin of the abdomen was marked last evening for the purpose. At 1 P.M. I saw her, and she was quite prepared in mind, and apparently in an excellent state of bodily health for the occasion; moderately lowered in tone, but with a calm soft pulse of about 80. The action of the pills had been attended by a little griping; and, soon after I left the house, she remarked to the nurse that she felt as if she were about to be unwell. Between this and three o'clock the catamenia appeared, and I consequently postponed the operation, but was not aware of the circumstance soon enough to prevent my friends arriving one after another to their appointment at four.

Having gone through her customary period of from three to four days, she was again well on the 5th of September, but the operation was not fixed for an earlier day than the 12th, that the tendency to relapse in this matter might be completely at an end. Her diet was very moderate during the whole of this time in respect to animal food, and for the last five or six days this was strictly forbidden. The following draught was taken on the morning of the 10th.

℞ Pulv. Rhei, ℈j.; Potass. Tart., Mannæ, aa. ʒj.; Spir. Ammon. Ar. ♏xv.; Tr. Hyoscyam. ♏xx.; Tr. Sennæ, ʒj.; Aq. Piment. ʒxj. M. ft. haust.

It operated well. On the evening of the eleventh, I found her in all respects in a desirable state for the operation. Menstruation had ceased about a week, and no threatening of a return had been felt.

℞ Extr. Colocynth. c. grs. viij.; Hyoscyam. grs. v.; M. et div. in pil. iij. h. s. s.

These did their duty effectually next morning.

12th.—I visited my patient about mid-day, and though hardly required, a little refreshed the marks upon the abdominal skin. The weather was hot, but the chill of instinctive apprehension had given her a cold hand and a pale cheek, not to be removed by the most determined spirit. The thoughtfulness of genuine courage was at work. At 2 o'clock she took a good basin of beef-tea. At 3, a copious enema of

warm water ensured the clearance of the bowels. Drs. Blundell and Henry Davies, Messrs. Vincent, Beale, Burrows, Camplin, Hitchman, and Law, having assembled, and all necessary preparations being complete, at about a quarter before five o'clock Miss K. seated herself firmly at the end of a couch. It was observed immediately, though silently, by those who had witnessed them, that the abdominal tumefaction much exceeded that which existed in either case of my former operations. The pillows and bandage being adjusted as on those occasions, Mr. Beale took his post on the right, Mr. Law on the left of the patient; the former to manage the integuments, the latter the tumor. I sat obliquely facing the end of the couch, on her right.

Having no purpose of deviating in this case from my former plan of operating, though under no pledge to its invariable adoption, I proceeded to make the preliminary or exploratory small opening of an inch and a half in the linea alba, and below the umbilicus. Meeting with no unusual circumstance, unless the jet of a small artery be thought such, it was soon completed, and the abdominal cavity entered. The state of the cyst, as far the finger can ascertain it, was made out. A momentary pause was asked by my patient to draw breath. The wish was opportune, as the granting it gave time for the bleeding artery to contract. Having mentally measured, by the bulge of the abdominal skin caused by the tumor, of what size the incision need be, I now divided the integuments from above downwards in the median line of the abdomen, slightly deviating to the left at the umbilicus, and having reached the preliminary section at its upper end, I then prolonged their division downwards from its lower end to the requisite extent. Of the nineteen inches and a fraction, the distance from the point of the ensiform cartilage to the pubes, fourteen were occupied by this extended incision. When completed, I promptly took my curved probe-pointed bistoury, and by the guidance of two fingers of my left hand, divided the peritoneum from within to a like extent. An enormous cyst gradually advanced through the wound. Mr. Beale carefully and effectually covered the viscera by closing the integuments behind it. Mr. Law sustained the weighty mass of disease. The broad uterine ligament of the left side constituted its pedicle, through which, under the protection of my own fingers, I thrust, from behind it, a needle armed with strong silk twist. The two halves of the pedicle were separately and tightly tied, and then it was divided between the ligatures and the tumor; the latter, weighing 28 lbs. being immediately removed without impediment from adhesion. No bleeding followed the division of the pedicle, which I tied with great force, having complete confidence in the strength of my ligatures, and believing that the period of their dislodgment depends much on the degree of constriction given to the substance of the pedicle in tying them. Having carefully but gently removed the blood collected at the lower part of the abdomen, and near the edges of the wound which had alone furnished it, I applied thirteen interrupted sutures; placed long pads of lint on each side, but a little away from the line of the wound, and over these applied strips of plaister, extending from one side of the body to the other, securing the whole by the bandage. Dr. Blundell had previously examined the other ovary, and found it healthy. Nothing could exceed the firmness of my patient's resolution. She had uttered no exclamation. Being now, however, somewhat faintish, she sipped a little brandy and water. After being placed in bed, slight vomiting occurred, and a very little brandy by itself was taken. An anodyne of gr. ¼ Morph. Acetat. in ℥jss. Mist. Campk. was given at about six o'clock, to be repeated in half an hour. I left her after the first had been taken with a pulse of 88.

10 P.M. — Had not slept; retched at 9, and brought up a little of the secretion of the stomach, slightly tinged with bile; complained of tightness at the lower part of the abdomen, as if the bandage were too tight, which I found was not so, nor was the plaister. Felt some tenderness on both sides of, and quite across, the lower part of the abdomen, but chiefly of the left side; and had pain in the back, and down the limb of that side. Urine drawn off, ℥ix.; pulse 105 to 108; no shivering nor chilliness; skin rather hot, but moist; temperature of the room, 72° F. Tongue clean; no headache, nor con-

fusion of mind; no bleeding from the wound; has drunk nothing but her medicine, and is not thirsty.

℞ Ext. Hyoscyam. gr. v.; Morphiæ Acetat. gr. ss. M. ft. pil. statim. sumend. A pint of water may be taken in the night, a little at a time.

13th, 8 A.M.—The vomiting recurred at 11 last night, and again twice between 5 and 6 o'clock this morning. Between 12 and 1 o'clock she fell asleep, and slept two hours, after which she dozed frequently. Urine was twice passed spontaneously, together to the amount of ℥v.; I drew off ℥xj. Though feeling better than she did last night, she says that her head aches a little, chiefly over the eyes, with a sense of "tired heaviness," but has no pain at the back of the head. Pulse 110, and rather full at the commencement of my visit, 102 at its conclusion; both carefully noted. Skin moist all night, but hot. Has taken nothing, not even the water, except one sip with the pill, and yet is not thirsty. Countenance animated, and with the colour of healthy warmth. Breathes freely without its hurting her. The sense of tightness at the lower part of the abdomen is less; but she feels it now all over, and she is sensitive over the cartilages of the ribs on the right side, but does not feel "the cut" much. Her back aches from the shoulder-bones all down the sides and legs, more particularly the left. Mind clear; no chills; no flatus; tongue a little furred at the back, and less moist than natural. Advised to take the water.

1 to 2 P.M.—Has slept nearly ever since my former visit, and the vomiting has not recurred. Urine drawn off, ℥ix. I had cautioned her against any effort to pass it, lest the wound should be disturbed. Skin warm, and freely perspiring; tongue whitish; headache less, and feels better; pulse 98, full and soft. Temperature of the room 74°.

10 P.M.—Had dozed occasionally, and once slept an hour since my last visit. Pulse 112; tongue clean and moist. So little thirst that she has taken only about a pint of water since the operation, now 31 hours. Urine has been passed in considerable quantity; ℥ij. only drawn off; natural in colour and other characters. A little flatus has been passed. Headache slight, but subsiding; mind clear; skin warm and moist. No shivering, nor chilliness, nor sickness; and the vomiting has not recurred since 6 in the morning. Complains of some pain "in the lower part of the stomach (meaning, of course, abdomen), in the left hip, and back, and right ankle." Breathes freely, without fear of creating uneasiness. Felt as if she could eat some beef, when the nurse was taking her dinner.

Rep. Pil. ex Hyosc. Ext. et Morph. Acet.

14th, 8 A.M.—Has had an excellent night, with several hours of sound sleep, having been quite easy during the rest of the time. "At this moment I am free from pain altogether," is her answer to my inquiry how she feels. No vomiting, nor sickness, nor headache, nor confusion of mind, nor shivering, nor chilliness. No hiccup nor cough since the operation. Skin warm, and has perspired freely all night. Rather more thirst, but has taken only three quarters of a pint of water, and seems to wish for nothing in preference to drink. I inquired particularly on this point, as it was suggested to me that some fancy respecting water being likely to cause her complaint to reappear was existing in her mind; and I felt that to take rather more of it would cool and refresh her under the present slightly feverish state of her system. She has since assured me that she had no such idea, but really did not want more than she took. Tongue clean, except a little brownish tinge at the back, a common effect of opiates. Limbs and all other parts of the body now easy, "except just the bottom of the stomach since the use of the instrument" (the catheter), and of the limbs when moved. Urine passed and collected, ℥ij.; withdrawn ℥ij. only; but, as she drinks so little, and perspires so much, this is not surprising; it is higher coloured, in part, no doubt, from the same causes. Pulse 116, soft, temperature 74°—to be lowered gradually to 72°, and then to 70°.

I adjusted the dressings a little, but did not examine the wound. I ascertained, however, by very gentle examination, that the abdomen was quite free from general tenderness, as it was from distension, or even fulness in any degree.

Half-past 1 P.M.—Much as in the morning. Pulse a little quicker; but my friend Mr. Law having visited her

with me, and the patient being much pleased at seeing him, perhaps accounts for it. Has taken soda water occasionally, not quite in full action, and in very small quantities—a wine-glassful at a time. It refreshes her very pleasantly. Up to this time nothing but this and plain water have been taken.

To have a little arrow-root made with milk.

10 P.M.—Took her arrow-root, a teacupful, but not till 48 hours, at least, after the operation: enjoyed it. Is cheerful in countenance and manner. Has been a little uneasy with flatus, but is less so now, and thinks the soda water may have been the cause. Has dozed. Pulse 115, soft; tongue clean and moist; skin warm and perspiring; ʒvj. urine passed; ʒiss. only drawn off, to assure myself that it was duly voided. The power of discharging it is now complete, and the slight effort required is attended by no inconvenience. I had, however, discouraged the act to this time. No sickness, vomiting, nor hiccup; no shivering nor chilliness; no pain except a little "at the bottom of the stomach," and some uneasiness in the legs, resembling rheumatism, she thinks, but very trifling. Slight headache, but no confusion of mind. No sense of inclination to relieve the bowels has occurred, nor flatus passed. Has no wish for more arrow-root, or any thing else. Dislikes pills, and would prefer a draught. Temperature 73. Pulse 111 at the conclusion of my visit.

℞ Tr. Hyoscyam. ʒss.; Morph. Acetat. gr. ss.; Acet. dist. gutt. v.; Aq. Menth. Pip. ʒj. M. ft. Haust. h. s. s.

15th, 9 A.M.—Passed a quiet night, being quite easy, but slept little till between 7 and 8 this morning. Skin warm and perspiring; pulse 114; tongue moist, and very little furred at the back part. Flatus troubled her at one time, but does so no longer; some was got rid of. A sense of itching of the skin also teazed her, but that has ceased. No sickness, hiccup, nor cough. Urine passed ʒvj. of higher colour. No distension of the abdomen; bears moderate pressure, even in the left iliac region. Limbs easier; back only feeling sore at its lowest part from lying constantly on it. More thirsty, and has taken a pint of water in the night; had previously not taken more than three pints of liquid altogether since the operation. To have arrow-root. Temperature 72. Moistened the lint which adhered to the neighbourhood of the wound preparatory to dressing it at

2 P.M.—When I did so, and took out all the stitches. Adhesion throughout, even to the very spot where the ligatures lie, and only barely leaving open the space they occupy. No pus anywhere. I laid a narrow strip of lint with spermaceti salve along the line of wound; then placed a long pad of lint on each side, over which strips of mild adhesive plaister across the abdomen, and the renewed bandage gave the requisite support to the abdomen. Urine passed ʒvj.

To have a glass of calf's-foot jelly.

10 P.M.—Pulse 110, soft. Has had her linen and position changed, and is comfortable. She felt rather feverish from 5 to about 8 o'clock; but is not so now. The legs are uneasy, but for which she would, she thinks, get sleep. Urine passed ʒviij.; tongue clean and moist. Enjoyed the jelly, and would like another. To have it.

Repr. Haust. anod.

16th, 8 A.M.—Passed an excellent night, and is free from all uneasiness, that of the limbs having gone off soon after my visit last night, and before the anodyne had been taken. As it was too late to procure a jelly, took arrow-root with milk instead, and relished it. Was hungry in the night, and wishes for an egg and coffee for breakfast. To have them, with a little dry toast.

Urine passed ʒviij. rather high coloured; a little flatus. Pulse 104; tongue moist, and but little furred at the back; and this state is limited to the morning. Temperature 70, to be reduced to 68.

2 P.M.—The catamenia appeared this morning. Has been taken out of bed, and lies comfortably on a couch. Had a jelly since her breakfast, and no ill effect has arisen from either. Perspires gently; weather remarkably hot.

10 P.M.—Has had tea and a little toast. Skin rather drier. Has felt hot. Pulse 100, soft and full. It has always had the character of fulness, though this was not noted, as the degree of it was not so marked as it now is. Complains of nothing. Slept little in the day, but had a short refreshing sleep in the evening. Tempe-

rature 72, and it seems difficult to get it lower, though the aspect of the house is north, and there has been no fire all day. Tongue clean and moist. No motion yet, nor any inconvenience in consequence. It may be prudent to procure one in the morning.

℞ Extr. Colocynth. c. Extr. Hyoscyam. aa. gr. vj. M. et div in pil. ij. h. s. s.

17th, 10 A.M.—Had an indifferent night, being twice affected with nightmare. Took some jelly, and this morning wished for the same breakfast as yesterday; pulse reported 95 before, about 100 after taking it. In all respects going on well.

2 P.M.—Wound dressed again. It is only a superficial line. In depth it is perfectly united, and the peritoneum has been shut from the first moment the wound was closed. No pus at any part of it, not even by the ligatures. Pulse 100. Has just taken some mutton broth with a little toast. Skin warm and perspiring. Temperature 72, and it was nearly or quite that in the shade out of doors this morning, where it is now hotter than in the house.

10 P.M.—Pulse 96, soft. Continues to menstruate, and has had a little bleeding at the nose, some few drops. Tongue clean and moist; and she perspires freely, rather too much so, particularly after sleep. Has slept on her "ligature side" for half an hour. Bowels not moved, nor has any thing passed from them since the operation, now full five days; nor have I seen any absolute occasion hitherto to disturb them, as there has been no abdominal distension or discomfort. Feels languid. As the pills seemed inactive, a copious enema of warm water was employed, and produced two abundant motions. A cup of sago with a glass of port wine was taken for supper.

18th, 8 A.M.—Her night was quiet, but she did not sleep much. The anodyne, ordered conditionally, and with a wish expressed on my part to discontinue its use if not really necessary, was not taken. Has made a good breakfast of egg, toast, and coffee, and felt to want it early. Pulse 92, full and firmer. Last night it was a little feeble. No return of epistaxis, but coughed once or twice slightly in the morning. Continues to menstruate, but very little. In other respects much as before.

2 P.M.—Pulse 88, after a dinner of ground rice pudding.

10 P.M.—In the course of the afternoon experienced a slight attack of gravel; and several little rough roundish concretions, consisting apparently of uric acid, were passed. She had taken soda water occasionally, in small quantities, during the last three days; and the alarm which this attack caused her being removed, she was directed to take it more freely. The urine had been rather high-coloured, and not very abundant; I have not noted the quantity. Pulse 83, soft and full. No motion. Sago and half a glass of wine for supper.

℞ Fel. Bov. inspiss. gr. x. h. s. s.

19th.—Passed a good night. In all respects comfortable. No more gravel has been voided. Wound dressed; a little thick healthy pus where the edges did not lie quite evenly together, also by the side of the ligatures, but in very small quantity. No tenderness at any part of the abdomen, not even in the left iliac region. In short, she is like a person quite well, one week from the operation.

10 P.M.—Pulse 80. More gravel was passed. No motion.

Enema aquæ tepid. To take the soda water freely.

20th.—A good night. Pulse 75. Bowels copiously moved; appetite good; urine plentiful, and much paler.

10 P.M.—Has had a comfortable day altogether, and slept in the evening. As she now eats rather heartily, it is desirable to keep the bowels free.

℞ Fel. Bov. inspiss. gr. x.; Aloes Barbad. gr. j.; Pulv. Cinnam. c. gr. iv. M. et div. in pil. ij. h. s. s.

21st, 1 P.M.—A good night, and feels quite well. Pulse 80. One copious pultaceous motion. In excellent spirits, and can hardly be restrained from singing. Can lie on either side, and in any position, with perfect ease. Wound dressed. Chicken and bread-sauce for dinner.

Rept. Pil. ij. h. s.

22d, 23d, and 24th.—Proceeding well. Wound dressed daily. It is a mere line; and the upper part of it, down to the umbilicus, chiefly healed.

Tr. Catechu applied.

25th.—Seems to have taken cold from a sudden and extreme change of weather. Pulse 90; and slightly feverish feelings.

℞ Extr. Colocynth. c. gr. v.; Hyoscyam. gr. iij. M. ft. pil. ij. h. s. s.

Next day she was better; and at night, the pills, which had operated mildly, were repeated. She also abstained from meat. A fire in the room, and a bottle of hot water to her feet, had been useful.

On the 27th was again quite comfortable, with a pulse at 80. The wound, though for the most part healed, required the partial application of nitras argent., as some redundant granulations had sprung up, and one side of the skin was a little too high, and very sensitive, principally just below the umbilicus. The application produced an excellent effect in a few hours, particularly in reducing the sensitiveness, which was the chief cause of restraint upon her movements.

29th. — Walked across the room, leaning on the nurse's arm, and next day did so several times without support. From this time she has become more and more active and independent of assistance, getting out and into bed, and sitting up great part of the day. Remarkably little discharge has proceeded from the ligatures, and they have been left to themselves very much, except being carefully guarded from accident. She usually takes an aperient pill at night, but not always. It would be useless to carry the report further; and it may perhaps seem to some readers that the details are given more fully than necessary. To the really practical inquirer, I trust, they will not prove wearisome; as they are designed to assist in illustrating a subject with which very few are at all acquainted by actual observation. Having, however, with this view prolonged the narrative so much, it is not my present design to occupy the readers of the Medical Gazette with many remarks.

The tumor itself requires but little description. A single principal cyst; a moderate portion of solid matter in a highly vascular condition; the fallopian tube stretching away to its fimbriated end, at a distance of some fifteen inches from the division of the pedicle; and the subjoined dimensions, are all the particulars that need be noted:—When lying, its circumference measured horizontally 3 ft. 8½ inches; vertically lengthwise 3 ft. 2 inches; and vertically across 2 ft. 10½ inches. It weighed 28 lbs. imperial weight.

Of the three cases of ovarian operation, which I have now placed before the profession, this one is perhaps the most interesting. It plainly demonstrates that, under proper precautions, the youthfulness of the patient need not deter the surgeon from attempting her cure; whilst the value of the relief afforded by the operation at such a period of life can hardly be over-estimated, when we consider the distressing annoyances to which the malady subjects a young unmarried woman in any station of life, more particularly one holding the position occupied by my patient.

Her recovery was in all respects more rapidly completed than that of either of my former patients.

With regard to the propriety of performing a formidable operation like this for such a disease, it may be briefly remarked that no means on which any reliance can be placed, except an operation, are, as far as I can learn, known to the most experienced *practical* physicians of the present day, any more than to those of past ages: none, at least, which unequivocally cure or mitigate the disease when arrived at such a stage as to require an operation. A mistaken idea prevails in some minds that the disease does not tend to shorten life, as well as to destroy its comfort. I shall hereafter shew that this opinion is totally at variance with facts. Like many other erroneous opinions, it is repeated on authority by men whose position might easily enable them to ascertain that it is devoid of truth. Compilers are apt to follow such men. How should they do otherwise? They themselves, with few exceptions, are little engaged in the observation of disease, and cannot be expected to form opinions, except upon the report of others. The rising generation of practitioners derive their instructions principally from men of these two classes, who thus propagate error from age to age, mixed up, indeed, with so much useful information as gives additional influence to the mischief.

Equally faulty in fact and in tendency is the suggestion that the operation itself is necessarily one of easy performance, requiring little anatomical knowledge, or skilful surgical adroitness. It may, indeed, be truly said of *any* operation, that the amount of mere anatomical knowledge required for the mechanical part of the surgeon's act is

not greater than a diligent student might acquire in a few months; and certainly not more truly of this operation, in which the separation of adhesions to the abdominal parietes and to the viscera themselves may be necessary: but it is the possession of correct physiological, pathological, and therapeutical knowledge that enables a practitioner to cope with the real difficulties of operative surgery, those which endanger his patient's life, or after-health and comfort. If to perform an operation so rapidly as to excite the astonishment of a large class of staring students, and for the sake of this worthless display to cause the greater mutilation of the patient, as in amputations, in order to avoid its consequences; if to disregard the preparation of the patient, so that dangerous symptoms must almost inevitably ensue; or so to mismanage the after-treatment that the patient's life is lost, when he might be otherwise cured; if to undertake without hesitation the performance of an important and hazardous operation in ignorance of those precautions which other men have shewn to be both necessary and effectual for the patient's preservation; if, in short, the dexterity of the mere anatomist be thus mistaken for perfection in the art of surgery; then, indeed, is it high time that such erroneous notions should be corrected, and that the profession should see the advantage of a different combination of qualifications for its *useful* exercise.

That the removal of dropsical ovaria by the large abdominal incision will become a legitimate operation in the hands of qualified surgeons, there can, I think, remain but little doubt on the minds of practical men who have looked into the subject; I know that many such already consider the operation as established by the cases of Dr. Clay and myself. My own experience confirms me in my opinion of its humanity, usefulness, and practicability, when properly conducted in well-selected cases; and that, so conducted, it will be the means of averting much suffering, and saving many valuable lives, I entertain not the slightest doubt. As a comparative novelty, however, it has to contend with unjust prejudice on the one hand; with ignorant rashness on the other. The former will gradually give way to conviction, or be reduced to silence; but the latter, in its reckless eagerness for distinction, may do much mischief by its unjustifiable proceedings, and so bring into undeserved obloquy what will otherwise be deemed a valuable improvement in surgery.

Guilford Street, Russell Square,
London, Oct. 3, 1843.

SULPHATE OF POTASS.

To the Editor of the Medical Gazette.

Sir,

In an article entitled "Two late Coroners' Inquests," inserted in the last number of the Medical Gazette, Oct. 6th, you have remarked, that "should it turn out that death was occasioned by sulphate of potass (as you are inclined to think it was), this will be the first case on record of poisoning by that neutral salt." Agreeing with you as to the cause of death, for the reasons to be adduced presently, I beg at the same time to refer you to several recorded cases wherein this remedy has occasioned symptoms of poisoning, and in some death. Moreover, whilst at Auxerre, Yorne, in 1839, it was stated to me by a *confrère*, one of the professors at the College, that the abuse of this salt, with a view to produce abortion, was notorious to the midwives of that department of France. At that time I conceived it to be so harmless a salt, as its name *sal polychrest* would lead us to infer, that I deemed it prudent to tolerate such a popular idea, rather than question its accuracy by the expression of a contrary opinion. Subsequently, however, the poisonous properties of this salt, when administered under certain conditions, were confirmed in my own mind by a case reported by M. Chevallier, one of the talented *collaborateurs* of the *Journal Médicale*, in the June number, 1842, of that work.

M. C. states, that the death of Madame B., in October 1841, was occasioned by this salt. This lady had been recently confined, and her medical attendant had directed 40 grammes, = 1 oz. 12 grs. T., of sulphate of potass, to be administered in six doses of 100 grains each. Death ensued in less than two hours after the remedy had been administered. Analysis of the contents of the stomach removed any

suspicion as to the purity of the salt, and left no reason to doubt but that death had been caused by the salt alone.

Case II.—Mrs. H., a nurse, administered pursuant to the instructions of the medical attendant, 8 grammes, = 2 drachms, of sulphate of potass. The dose was sufficient to cause such symptoms as led the practitioner to imagine that the patient had taken poison.

Case III.—In the *Dict. Univers. de Matière Médicale*, p. 485, MM. Merat and Delens state:—We were witnesses, in 1821, that 30 grammes, = 7½ drachms, of sulphate of potass, taken by mistake for Seidlitz (Seignetto?) salt, caused a kind of poisoning (burning sensation, pains in the epigastric region, vomiting, &c. &c.)

Case IV.—M. J. G. Greisel relates, in the *Univ. Acad. Nat. Cur.*, Dec. 1, 1672, p. 77, that the action of 2 grammes, = 30 grains, of this salt, caused excessive purging, ending in death, to a patient suffering from fever; but M. G. observes, that it is owing more to the inopportune employment of this salt, than to its excessive activity, that such grave accidents result from its use.

Case V.—M. Gardien has remarked, in the *Dict. des Sciences Médicales*, vol. vii. p. 165, that very small doses of this salt irritate the stomach and bowels of delicate women.

Case VI.—M. Sobaux cites four cases by which he seeks to demonstrate that this salt is very apt to prove injurious, giving rise to serious accidents. Lastly, I may state, as coming under my own observation, symptoms resembling those occasioned by corrosive poisons supervened where a dose of four drachms of this salt had been administered to the wife of a friend immediately after her confinement. The facts mentioned at the commencement of this communication, when suggested as an explanation to the medical attendant, only drew forth an incredulous shrug.

Perhaps, if you think this letter worthy of insertion, some practitioners, regarding the authorities quoted as entitled to consideration, may take an opportunity of furnishing, through the medium of your pages, the result of their experience. A farther benefit may, indeed, arise from it, that those who are only protected by *the diploma* of the Pharmaceutical Society may observe caution in recommending what are termed harmless medicines; for by the authors most frequently consulted by counter-practitioners, the dose of sulphate of potass is stated to be from ten grains to four drachms; and, indeed, Dr. Christison observes, this medicine is termed a mild cathartic and convenient laxative, undeserving of the neglect into which it has fallen.

I am, sir,
Your obedient servant,
G. M. Mowbray.

36, Paternoster Row,
Oct. 6, 1843.

ON VIVISECTION.

By Robert Hull, M.D.

(For the London Medical Gazette.)

"Weinhold took away the brain and spinal marrow of a cat, and filled the skull and vertebral canal with an amalgam. Life appeared to be restored, the animal lifted its head, opened its eyes, and, with fixed stare, endeavoured to walk; and, when it dropped, tried to raise itself. It continued in this state twenty minutes."

This diabolical business was meant to illustrate the "power of galvanism." I wish the law of those dominions could serve the operator in a similar manner. The Lex Talionis approves itself to our native sense of justice. What evidence is now wanted of the power of galvanism?

In this country Martin's Act might be brought to bear on similar diablerie. Such executioners are beyond the reasoning appeal; their feelings are unnatural. They endure no pangs in their processes of torture; they chuckle under the excitement. They cannot understand that unworldly philosopher, Sir Charles Bell, who wrote to his brother, "I cannot proceed without experiments, which are so unpleasant that I defer them. I cannot convince myself that I am authorised in nature, *or in religion*, to do these cruelties."

"He was not of the Frenchified butcherly school of anatomical experimenters. We think Orfila boasts of having sacrificed the lives of *ten thousand animals* in his researches into poisons." Thus speaketh the Quarterly Review. I would exhort the govern-

ment of that land in which is performed such coward cruelty—Hanc tollite ex civitate, judices, hanc pati nolite diutius in hac republica versari: quæ non modo id habet in se mali, quod tot animalia atrocissimè sustulit, verum etiam hominibus lenissimis ademit misericordiam consuetudine incommodorum.

This Christian philosopher might have interpreted liberally the Pagan sentiment—Incidere vivorum corpora et crudele et supervacuum est.

Parents will do well to preserve their children from the butcherly schools, lest their ingenuous hearts be hardened *consuetudine incommodorum.* For the transit from less to greater horrors is easy. He who is callous to the supplicant moans of an unprotected, impotent quadruped, will soon be deaf to the shrieks of a man. He is not far from the diabolism of Messrs. Herophilus and Erasistratus, qui nocentes homines à regibus et carcere acceptos, vivos inciderint, consyderarintque etiam, spiritû remanente, ea quæ natura ante clausisset.

Mr. Macilwain, a surgeon of literary and operative fame, has been long impressed with the inutility of vivisection, its inconclusiveness, its immorality. This is just what the medical world should learn; he has stated it in his philosophical work on "Medicine and Surgery." I hope his *proofs* will be published.

The nauseating experiments on unprotected animals, made to elucidate the sounds of the heart, bear little, if any, proportion to their vaunted utility. I believe *none.* I am unwilling to allude to the performances of Dr. Hope, simply because he is dead; but I declare that I cannot reconcile the barbarism of his numerous vivisections with the superiority claimed for his religious character. This appears to be so dear to a certain section of professors that I know his biography is purchased and distributed to men of "doubtful views." But he is thus peculiarly brought—works, memoir, all—before the public tribunal; and I have a right to pronounce my humble sentiments. See the exclusiveness claimed for his piety by theologous Almacks. "He felt Dr. Burder especially endeared, as the *only one* of his professional brethren from whom he could ask advice founded on religious principles." Is this, or is it not, a calumny? Very many members of the medical profession, and they practising and accessible in the metropolis, deserve in every sense of the terms to be considered as good and exemplary christians. They may not belong to a pharisaical clique; nor cant the shibboleth of a miserable party; but, with a dignified, unobtrusive, *quiet* piety, they are passing through this probationary state, doing their duty to man, giving his glory to God.

——————— σπάνις
τῶν ἀγαθῶν ———————

may be true enough comparatively; but they are not yet reduced to "one."

To me it is surprising that persons who set themselves up as moral censors should contemplate with complacency the sufferings of innocent animals. Before me lies an essay, written against all stimulant drink, by one Ralph Barnes Grindrod, who quotes without any reprobation alcoholic experiments on animals, in comparison with which drunkenness is a virtue. Worthless, puerile, murdering manipulations, performed on God's creatures, quite as meritorious as Messieurs Rayer, Majendie, Sigelas, Grindrod, or the whole sect of water-drinking fanatics put together.

"Thou shalt not do evil, that good may come!" As a believer in Christianity, I hold that this proposition extends to helpless animals. I firmly believe that it excludes vivisection from the pale of morality. I boldly declare that nothing can justify vivisection. It is a damnable process! and I close my ears to the heartless sophists, who twaddle in its defence. Great philosophers, undoubtedly, have tormented their fellow-animals; and prodigious discoveries have been trumpeted as the result; but I believe that no discovery, worthy the name, has been logically due to this diablerie. Read Harvey, De Sanguinis circulo; and say, if the anatomy, the physiology, the symptoms, did not make out, by his own showing, the circulation of the blood; all his vivisection being as superfluous as it was infernal.

All subsequent butcheries, for chirurgic or physiologous ends—from experiments for aneurism and inflammation, down to those on the excito-motory system—I believe to be supererogatory, and as puerile as savage.

To these remarks I am animated by a simple sense of duty and humanity; and so imperative do I feel the impulse, that, if I held my peace, I should deserve the caustic objurgation of Andromache:—

μιαιφόνον μὲν ὀυκετ' ἂν φύγοι μύσος
ἐν τοῖς δὲ πολλοῖς καὶ σὺ τόνδ' ἀγωνιεῖ
φόνον.

Norwich, Oct. 2, 1843.

CASE OF CANCRUM ORIS.

By Robert Dunn, Esq.

(For the London Medical Gazette.)

S. Ridley, aged 2¼ years, was brought to my house, by her mother, on Saturday, Sept. 16. The child had an expression of heaviness about the eyes; the skin was hot, and the pulse quick; the mucous membrane of the mouth was in an unhealthy state, and the gums were spongy; there were blotches upon the body, resembling the pustular form of scabies; the child was of a cachectic habit, arising from the combined influence of an *unhealthy locality* (Windsor Court, in the Strand), and *defective nutrition*. It was scarcely possible, indeed, for it to be otherwise, from the terms upon which the parent of the child lived. I have often pitied the poor children. Within the last few months, the mother nearly lost her life from *flooding*, in consequence of a *miscarriage*, occasioned, as she stated to me, "by the kicks and blows, and brutal treatment, of her husband," and the external marks upon her body gave awful proof of acts of violence. I have been called upon to furnish a certificate of her inability to appear at Bow Street Police Office, on account of *family differences*. I think it necessary to state these facts. They are important in a medico-legal point of view for forming a just opinion on the conflicting testimony in the evidence of the case, but still more in reference to the effects of *defective nutrition* and the formation of the cachectic habit. How children, living in such a vitiated atmosphere, and neglected as I have seen them, could escape constitutional deterioration, it is difficult to conceive. I prescribed for the child a mixture of carbonate of magnesia and soda; three alterative powders, each containing P. Rhei, gr. iv.; Sodæ exsic. et Hyd. ç. Cretâ, aa. grs. ij. alternus noctibus sumendus; and some camphorated sulphur ointment to be applied to the blotches. One only of the powders was given. On the Monday morning I was asked to visit the child in Windsor Court. I found the eruption of measles was coming out, but not freely; the child was in a low, drowsy state; pulse quick, but weak; skin hot and dry; bowels much relaxed, with pneumonic indications. The feet were put into hot water with mustard; cataplasms of linseed meal were applied to the chest and between the shoulders, and cretaceous medicine with ammonia administered. There was great prostration of the vital powers, and so much stupor, that strong mustard poultices did not arouse the child, nor elicit any expression of pain or uneasiness. The eruption was not properly developed, and on Wednesday the measles disappeared, leaving her in a very low and depressed condition. My attention was now directed to the state of the mouth and gums, and about which I questioned the mother. Previously to the child's illness the gums had bled frequently, and the mother feared this might arise from using a small brass ring, with which she played at school; the texture of the gums was now of a livid hue, and spongy. I observed at the junction of the gums with the lining membrane of the lower lip, in front of the mouth, a number of small yellow spots, resembling aphthæ, and giving vent to a whitish exudation; the intervening mucous membrane was tumefied and red. I ordered some borate of soda with honey to be applied frequently, with a camel's hair pencil; ten grains of the compound jalap powder to be given, and a saline mixture, with ammonia. Next morning, in cleaning the aphthous spots with the brush, I perceived irregular ulcerations with ragged edges. These ulcerations, for the next three or four days, slowly but gradually extended, assuming a dirty grey appearance, and were covered with a tenacious purulent exudation. The breath, which was fœtid from the first appearance of the ulcers, now became almost intolerable. The same kind of aphthous points appeared, two or three days subsequent to the first, on the upper lip, right cheek, and gums, and quickly passed into the same state of ragged ulcerations. A lotion of

chloride of soda was kept almost constantly applied, and every means to support the child had recourse to; ammonia, quinine, beef-tea, and port-wine, &c. but without effect. The disease gradually progressed in the *dry form*, the *forme charbonnease* of M. Taupin; the gums of the lower jaw were reduced to a black fœtid pulp; the child herself removed the whole of the teeth from it, with her fingers, one by one; the lower lip and chin became swollen, soon passing from a reddish hue to a dingy yellow colour, having the cellular substance extensively infiltrated with yellow serum. The first external eschar appeared upon the chin, about a week after the appearance of the measles, and rapidly increased in size, changing from a dirty yellow to a black colour; the cheek and gums, and upper lip on the right side of the face, as well as the lower lip and chin, were connated, before the poor child died, into a black, soft, and homogeneous mass, and giving out a most intolerably strong gangrenous fœtor. The child died on the 1st of October, fifteen days from the time I had first seen her. My friend Dr. Todd, of King's College, kindly saw the case twice with me during the progress of the disease. A coroner's inquest was held upon the body, under the suspicion that the child had died from the effects of mercury. It was alleged that instead of the 10 grains of compound jalap powder, which I had prescribed 12 days before her death, a slate-coloured powder, 10 grains of the Hydr. c. Creta, had been sent, and was given. How far this allegation can be supported by any degree of probability, I must leave to be deduced from the history of the case, the character of the parents, and the fact that the gentleman who dispensed the medicine is now in his third year's attendance on the medical and surgical practice of King's College Hospital. The most correct report that I have seen of the coroner's inquest appeared in the Morning Post. Mr. B. Brooke, 27, Bedford Street, surgeon to the Strand Union, who made the post-mortem examination by order of the coroner, satisfied the jury that the child died a natural death, and offered it, as his opinion, that no medicine, not even mercury itself, could produce the disease.

Dr. Todd bore testimony to the specific character of the disease, and to the correctness of the treatment which had been pursued. Mr. Walker, surgeon, of Drury Lane, who had been surreptitiously called in by the mother, voluntarily came forward, and nobly bore the same testimony. Mr. Brookes gave the following brief account of the post-mortem appearances:—"The right side of the face, half of the nose, upper and lower lip, were perfectly black. Upon carefully examining the inside of the month, there was observed great ulceration of the gums. The alveolar processes were denuded, and the teeth gone. Half of the tongue was black, and the inside of the cheek and fauces gangrenous—the whole exhibiting the *true cancum oris*, or gangrene of the mouth. The stomach was perfectly healthy, and the small intestines diaphonous."

During the last week, indeed on the very day upon which the inquest was held, I was called in to another case of the *metastatic* variety of the cancrum oris, supervening upon measles also, in a boy four years old, in Castle Street, Leicester Square, and attended by Mr. Skegg, of St. Martin's Lane. Here the attack came on without any premonitory indications. A small tumor formed in the inner surface of the cheek; a gangrenous appearance supervened, and the breath became extremely fœtid. Externally, the surface of the cheek became tumid, reddish, and shining. A lotion of chloride of soda was assiduously applied, and quinine and liquor sarsæ. freely given. The slough separated: the opposite side became in the same way affected. The second slough has come away, and the child, under the quinine, sarsæ., and generous diet, is now gradually progressing to convalescence.

15, Norfolk Street, Oct. 10, 1843.

MEDICAL GAZETTE.

Friday, October 13, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

A FEW WORDS TO STUDENTS.

In the hints which we ventured to address to pupils a twelvemonth ago,

we observed that the first error which they often commit, the error, namely, of living in lodgings, instead of forming an integral part of a family, is the parent of a hundred more. But the more we consider the subject, the less blame shall we attribute to the unfortunate student himself, and the greater to those who have indiscreetly left him a choice in a point where his age renders him incapable of judgment. The selection of a school, too, cannot with propriety be left to a youth of eighteen; who may be easily led astray by offers that would be heard with incredulity by his parents. Nay, even so poor a temptation as the addition of ten pounds to their pocket-money might seduce some to prefer brass to gold, and to put up with the manifold imperfections of schools which have nothing to recommend them but their cheapness. Uninfluenced by these paltry considerations, the parent to whom years have brought experience as well as grey hairs, will choose a school where the teachers are eminent for the sciences which they profess; and when circumstances admit, he will be influenced by the same principle in his selection of the house which is to be the asylum of his son in the metropolis.

For, it is thought, and with justice, that the proximity of high talent has somewhat vivifying, and that it is impossible to enjoy the social intercourse of a first-rate man, without being inflamed, occasionally at least, by the scintillations of his genius. When we read, for instance, as we still do from time to time, that a lately deceased practitioner was a pupil of John Hunter, we feel that we have lost one whose opportunities of professional improvement were boundless; who was taught, not only by direct instruction, but by casual hints; who was not only admitted to the feast of science, but might boast of his participation in the crumbs which fell from the rich man's table. And if these grains from the golden stream—these precious fragments carelessly borne along by Pactolus—are received in a fit reservoir, the effect is noble indeed! *Quodcunque recipitur*, say the schoolmen, *recipitur ratione recipientis**. The ancient sage, when asked what men should learn when young, answered, that which will profit them when old; and we should advise the parent, when he selects a family for the abode of his son, to fix on one whose example he would wish him to follow in after-life.

Those students who are happily anchored within the safe roads of a Collegiate establishment, or the quiet haven of a private family, will hardly need our advice as to the best method of spending their time; those who are less fortunately situated will not be the worse for our counsel.

During the first winter session the pupil can hardly spend too much time in the study of anatomy. A lecture on anatomy, an anatomical demonstration, and his own dissections, will fill up great part of the day, and will leave him just time enough to attend lectures on chemistry and on materia medica. The latter may now be divided into two courses of fifty lectures each, one of which may be attended in the summer†.

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* We may suppose Darwin to have been inspired by the society of Watt, when he exclaimed, in 1791—

"Soon shall thy arm, unconquered STEAM, afar
Drag the slow barge or drive the rapid car!"

Another time, at one of the meetings of the scientific club, to which they both belonged, Darwin said, "I have formed an idea of a duplex pen, a pen with two quills, by help of which one may write two copies of anything; which will thus, at a single operation, produce both the original and the transcript of a letter."

"I believe," replied Watt, "I can find a better way of solving the problem: I shall think over it to-night, and communicate my ideas to you to-morrow." By the morrow, the copying press was invented, which has been adopted, with some improvements, in half the counting-houses of England.—*Gentleman's Magazine*, Nov. 1841.

† Vide the new regulations of the Society of Apothecaries, in our number for the 22d ult.

If the study of anatomy is not deferred to the last moment, but is begun, as it ought to be, during the earlier part of the pupil's apprenticeship, it would be well to add comparative to human anatomy, and study the frame of animals as one great whole. But those who have trifled away whole years in pounding medicine, or in employments even less laudable, far from affording this luxury of science, will often have to endure that most painful of privations, a minimum of knowledge!

As for taking notes, it can scarcely be advisable to do so habitually in the anatomical theatre, except during the physiological part of the course; yet not only there, but in the dissecting room, points may sometimes occur, worthy of being inserted among the student's memoranda. On the subject of notes, Dr. Thomas Young expresses himself with his usual lucid good sense.

"The practice of taking notes from lectures is of clear and decided utility: and every student ought to make it a point to keep correct and complete notes of one course of lectures on each department of medical science. But it will seldom be advisable to take notes of a first course, where two or more are to be attended; in order that the mind may, in the first instance, be wholly devoted to following and comprehending the lecturer. The use of shorthand I consider as every way to be reprobated: it converts the writer into a mere machine: it employs him in copying words, instead of digesting and compressing thoughts; and unless he has two or three more hours to bestow on the same subject after the lecture, which very few lectures are worth, his manuscript remains in a form almost as inconvenient for reference as if it were written in an unknown language."*

When the student attends a hospital, we strongly urge him to take, and to keep, notes of the cases. When medical schools shall emerge from the embryo state in which they now slumber, and shall be carried on with a zeal proportioned to their importance, the student will no longer be recommended, but commanded to take notes. If not his teachers, the state will interfere, and will not let loose those who have neglected the most obvious means of instruction, to practise upon their defenceless fellow-creatures.

It is to be wished that case-books were published, printed under the sanction of some of our principal physicians and surgeons, as a guide to the student and the practitioner. At present, we blush to say, there are learners of the healing art who keep no note-books whatever of cases!

The student when he begins to attend cases for himself must put down a diagnosis in every instance, with the reasons which have led him to draw it. Erroneous diagnoses will lead in time to true ones; and we shall no longer be startled by such shirkings of the question "as disease of the chest" in the registers of mortality.

We gave the new regulations of the College of Surgeons in our number of the 1st ult., and those of the Society of Apothecaries on the 22d ult.

The Worshipful Society, after setting forth the course of study in all its details, observe that "the above course of study may be extended over a longer period than three winter and two summer sessions, provided the lectures and medical practice are attended in the prescribed order, and in the required sessions."

If we understand the programme aright, the only subjects which the pupil can push beyond the limits of the three winter and two summer sessions are, midwifery, with the diseases of women and children, and practical midwifery.

If we are not mistaken, these subjects, and these alone, may be delayed, and the five sessions be thus relieved

* Young's Med. Literature, 2d Edit. p. 13.

of part of their overplus. If we *are* mistaken, we should be glad to be told so, as the subject is of some importance.

In the previous set of regulations it was doubtful, as we pointed out on a former occasion*, whether the student was required to attend the medical practice of a hospital for eighteen months, or might attend a hospital for twelve, and a dispensary for six months. This doubt is now cleared up, and the choice just mentioned is left to the pupil. We cannot suppose that this has been done to spare the pupil's purse, as hospitals in general have accommodated themselves to the Society's regulations, and require no more for eighteen months' attendance than for twelve. Even where this has not been done, the difference is very trifling, and even less than the slender fee of a dispensary. We therefore suppose it may have been done to give the student the opportunity of seeing different styles of practice, and modifications of disease; and if dispensaries were somewhat better conducted, this would be a valuable result of the permission.

We need hardly hint to those who do not confine their medical studies within the narrow limits of legal obligation, that some diseases, as they have obtained special hospitals for their cure, so, likewise, they deserve a special study. Among these we may mention fever, syphilis, diseases of the eye, and insanity. The diseases of the mind, in particular, attract more and more of public as well as of professional attention; and those who are not too eager to begin the pursuit of their profession the very moment they have obtained their license or diploma, will do well to study the aberrations of human reason, and the modes of rectifying them†.

Before concluding, a word to the hypochondriac student—to him who fears that the crowd of competitors must render his success impossible, and that his talents will be unrewarded, because unseen. Let him be assured that the public are as desirous to enjoy the services of men of talent, as these are to reap the reward of their merits. The attorney is as solicitous to procure an effective advocate, as the young barrister can be to catch the briefs which are flying around him. A nobleman, when ill, longs as earnestly for the aid of a skilful physician as any physician can desire practice among the nobility.

Hence, although knowledge cannot be brought to market with quite the same ease as material substances, it ultimately meets with eager purchasers; and talents, whether brilliant or solid, are nearly as certain of finding a market as diamonds or Portland stone.

Finally, let the student whose time is not limited make use of this splendid advantage; and let him of scantier means balance the unkindness of his fortune by the intensity of his diligence, so that his years of study may seem long, when we consider how much he has crowded into them:

> Quid numeras annos? vixi maturior annis;
> Acta senem faciunt; hæc numeranda tibi!

COMPLIMENT TO THE MEMORY OF SIR CHARLES BELL.

Sir Robert Peel has addressed the following letter to Lady Bell:—

"Whitehall, Sept. 4.

"Madam,—I have had great pleasure in recommending to Her Majesty, that in consideration of the high attainments of your lamented husband, and the services rendered by him to the cause of science, a pension of one hundred pounds per annum for your life, shall be granted to you, from that very limited fund which Parliament has placed at the disposal of the Crown for the reward and encouragement of scientific labours.

This pension, small in amount as it

* Medical Gazette, Sept. 30th, 1842.

† We had the pleasure of informing our readers last year that St. Luke's had been opened to pupils; and it still remains so.

necessarily is, will perhaps be acceptable to you, as a public acknowledgment on the part of the Crown of the distinguished merit of Sir Charles Bell.

I have the honour to be, madam,
Your faithful and obedient servant,
ROBERT PEEL."

VITAL STATISTICS OF SHEFFIELD.

To the Editor of the Medical Gazette.

SIR,

THE distressing account of the fork-grinders of Sheffield, and your benevolent appeal on their behalf, given in the GAZETTE for September the 8th, suggest the propriety of any one who has a hint to give on this vitally important subject to give it forthwith, in the hopes that it may arrest the attention of some one, or more, who may have the power to enforce, or rather to introduce, its adoption, if practicable and effective; or, by causing others to put "their brains in steep," elicit some more efficient protection against so dreadful a mortality as that among the fork-grinders.

You suggest "the substitution of *wet* for *dry* stones:" surely if this had been "practicable" it would never have been otherwise. Humanity forbids any other conclusion. May we not, then, fairly conclude that a plan, at once so simple and so obvious, cannot be adopted? Magnets have, I believe, been tried; such means would of course only retain the metallic particles, and even these perhaps but partially. Myself the subject of asthma, and liable, at one time, to a recurrence of this troublesome, though far from fatal disease, on inhaling any irritating gases, I remember to have descended, leisurely enough, a rather long flight of stairs, at the bottom of which was burning a great bundle of straw, that had been accidentally ignited. In the midst of this very suffocating smoke I respired, really quite freely, for, of course, some seconds; and this I did by applying a silk handkerchief, once or twice folded, closely over my nose and mouth. I have subsequently enabled asthmatic patients, by the same method, to work comfortably in the most dusty atmospheres, for hours at a time; for example, in turning over wheat, &c. in large granaries. Could no modification of a plan so simple and economical be adopted with the operatives in question? It really appears to me that two plies of silk, extending from the bridge of the nose downwards to below the chin, and laterally over each cheek, with perhaps an elastic pad —of horse-hair or the like, sewed up in silk— on each side of the nose, and an elastic band over the vertex, with another horizontally over the occiput, to retain the whole in situ, would go far, if not entirely, to put a stop to so fearful an expenditure of human life. It is understood that the mortality among such of the stone-masons as labour at the finer kind of work in Scotland, where the stones are "dressed" *under cover*, more or less complete, is decidedly greater than it is among the same class of men in England, where such operations are carried on, more or less completely, *in the open air;* a statement which, if correct, is too important to be lost sight of in the present instance. Again, Dr. David Boswell Reid used fearlessly to experiment with the arseniuretted hydrogen, and other deadly agents, before his numerous class, over a powerful *descending current* of air, obtained by opening up a horizontal branch of a long chimney leading from a furnace.—Believe me, sir,

Yours very truly,
R. E.

October 7th, 1843.

EDINBURGH DEGREES.

To the Editor of the Medical Gazette.

SIR,

IT is some time since I first addressed you on the subject of "Medical Officers under the Poor-Law, (vide p. 432). My communication elicited two replies—the first from "Edinburgo-Londinensis," who adduces *one* example of non-removal from office, certainly creditable to the honesty of the Poor-Law Commissioners, but nothing is brought forward by him to meet what is *implied* in the statement to which I alluded, namely, the qualification. The second letter, that from Mr. Wolseley, does give the information sought for, in the reply made by Mr. Chadwick "that medical practitioners possessing only a Scotch qualification are not legally eligible for the appointment of medical officers in England." Those elected will not be removed, but in future none unpossessed of both a London College of Surgeons' diploma, or the Apothecaries' Company's license, will, in future, be elected. The North of England Medical Association have, through its Council, pointed to this "unjust restriction," (vide p. 221) which, from your report of their meeting, I find affects not only the Scotch, but the Irish University and College of Surgeons. The Medical Association of the North of England, and all the medical associations of the kind, should unite in removing such an odious restriction on their brethren of the sister kingdoms. From whence have been, of late years, many valuable instructors derived by the schools and colleges of London? From Edinburgh. From whence much valuable,

much original information? From Dublin. Yet the students of these schools are, in after life, as practitioners in England, to be declared unqualified by the Poor-Law Commissioners; and the only mode of obtaining their liceat is to pass an examination at the Royal College of Surgeons, London, and the Hall; or, in other words, to pay a limited sum of money as "a footing" in England.

One question in conclusion.

What is the *legal* value of a medical degree conferred by the Senatus Academicus of the University of Edinburgh?

If no one among your correspondents can reply to this, the Dean of Faculty at Edinburgh can, if he will, I presume.

I am, sir,
Your obedient servant,
E. M. R.

Sept. 28, 1843.

NITRATE OF SILVER IN OPHTHALMIA.

M. Velpeau has endeavoured to distinguish the circumstances which should regulate the various modes of employing the nitrate of silver; but as they are all founded on anatomical differences, they seem to us of little use in practice. The employment of the nitrate of silver ought to be founded, not on differences of form, which are very difficult to ascertain, and which are often quite arbitrary, but on differences in the nature of the ophthalmia. There are many kinds of severe ophthalmia in which the nitrate of silver is very efficacious; among these is the purulent variety. In this kind of ophthalmia, which is often connected with some internal disorder, and which is frequently epidemic among children, M. Velpeau proposes to use from one to two parts of the nitrate of silver, dissolved in thirty parts of the vehicle. M. Baron, however, says that in the Foundling Hospital, where this form of ophthalmia is very common among newborn infants, a much stronger solution is found necessary; the proportions being from eight to sixteen parts of the nitrate of silver to thirty of water. — *Gazette Médicale*, Oct. 7, 1843.

REMEDY FOR HYDROPHOBIA.

By Dr. Asmus.

The history of the remedy is as follows. The Thömer family at Stolp possessed the receipt as long as any could recollect, and distributed the medicine. Chemical examination did not succeed in discovering its composition. Often as it had been used, no case was known where hydrophobia had appeared after its employment, not even when the first symptoms had indubitably begun to manifest themselves. The directions are, that the person bitten is to swallow three times as much of the powder as can be taken up with the point of a knife, for three days running, in the morning. It is to be taken fasting and in warm beer, and the patient is to wait till perspiration comes on. No particular diet is required, nor scarifying or cauterizing of the wound. Many respectable persons pledge themselves to the unusual efficacy of this remedy, which was communicated to Dr. Asmus by the last Thömer. Its composition is as follows:—

℞ Lap. Cancror. ppt.; Pulv. rad. Gent. rubr. aa. ℥ij.; Bol. rubr. ℥j.; Gummi myrrhæ, ℥ss. M. ft. pulv. subtilissimus. —*Veterinarian, and Schmidt's Jahrbücher.*

FILARIÆ IN THE BLOOD OF A LIVING DOG.

MM. Gruby and Delafond communicated to the Academy of Sciences the discovery of the entozoa circulating in the blood of a strong and healthy dog. Physiologists have for a long time been aware of the presence of certain entozoa in the blood of reptiles and fishes, but this is the first instance in which they have been detected in the blood of a *living* mammal. It is of high importance to physiology, pathology, and natural history, to show not only the existence of worms in the blood, but also their circulation in this fluid, in the animals which come near to man in the scale of organization. These entozoa have a diameter of 0.003 millimetre, and a length of 0.25 millimetre. These bodies are transparent and colourless. Anterior extremity is obtuse—posterior or caudal extremity is terminated by a very slender filament. At the anterior part may be observed a little round depression, 0·005 millimetre long, which may be considered as the buccal fissure. Their motions are very active. Their life has been prolonged ten days after the blood has been taken from the vessels, and exposed to a temperature of 15° centigrade, or 59° Fahrenheit. They swim among the globules of the blood with great vivacity, exercising an undulating movement. MM. Grüby and Delafond found them in the blood taken from the coccygeal arteries external jugular veins, capillaries of the conjunctivæ, mucous membrane, skin, muscles, and every where this liquid was found to contain them. The urine and other excrementitial matters did not contain them. The diameter of these entozoa being less than that of the blood corpuscles, enabled them to circulate through the capillary blood-vessels.—*Comptes Rendus;* and *Physiological Journal.*

EXTIRPATION OF THE SALIVARY GLANDS IN ANIMALS.

By M. Budge.

In his researches on the saliva, M. Budge constantly found that fluid alkaline, before as well as after a repast. This alkine reaction was found to exist in animals even after a prolonged fast. To ascertain what effect the salivary glands had on the alkalinity of the buccal secretions, M. Budge extirpated the whole of the salivary glands of a dog, viz. the parotids, submaxilary, and sublingual glands of both sides. The dog survived the operation, but the buccal secretions were constantly found alkaline. When the dog was killed at the end of a month, the fluid of the stomach was found slightly acid. The same operation was repeated in a rabbit, and with the same success,—the buccal secretions remained alkaline. — *Medicinische Zeitung*, November 1842, and *Edin. Med. and Surg. Jour.* October 1, 1843.

SYDENHAM SOCIETY.

To the Editor of the Medical Gazette.

Sir,

Would you allow me, through your columns, to hint to the Council of the Sydenham Society, that medical biography would be a subject well worthy of their attention, for publication. A volume of Hunterian Orations, or selections from them, would be very acceptable to the members, and would be an excellent account of the life of John Hunter, and also of a great number of others whose lives are sketched in the different orations, and also would give the style of writing of the most eminent surgeons of late days.—Yours,

A Member.

Sept. 1843.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, Sept. 30, 1843.

Small Pox	6
Measles	30
Scarlatina	54
Hooping Cough	28
Croup	5
Thrush	13
Diarrhœa	67
Dysentery	22
Cholera	6
Influenza	0
Ague	1
Remittent Fever	0
Typhus	29
Erysipelas	5
Syphilis	1
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	171
Diseases of the Lungs and other Organs of Respiration	231
Diseases of the Heart and Blood-vessels	31
Diseases of the Stomach, Liver, and other Organs of Digestion	118
Diseases of the Kidneys, &c.	4
Childbed	6
Paramenia	0
Ovarian Dropsy	1
Disease of Uterus, &c.	2
Arthritis	1
Rheumatism	1
Diseases of Joints, &c.	4
Carbuncle	0
Phlegmon	0
Ulcer	1
Fistula	0
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	112
Old Age or Natural Decay	49
Deaths by Violence, Privation, or Intemperance	41
Causes not specified	3
Deaths from all Causes	1043

ROYAL COLLEGE OF SURGEONS.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, October 6, 1843.

T. Sumner.—W. H. Moxhay.—R. Tyrer.—J. Holliday.—R. Martin.—S. Battley.—E. Edmunds.—J. E. Huxley.—W. Brown.—T. Hawksley.—G. Appleton.—J. Benson.—H. Johnson.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, October 5, 1843.

W. Hitchins, Tiverton, near Bath.—T. P. James, Abergavenny, Monmouthshire.—C. Cooper, Martham, Norfolk.

METEOROLOGICAL JOURNAL.

Sept. 1843.	Thermometer.	Barometer.
Wednesday 27	from 38 to 54	29·53 29·44
Thursday . 28	37 58	29·44 to 29·54
Friday . . . 29	38 57	29·66 29·70
Saturday . 30	45 64	29·54 29·64
October.		
Sunday . . 1	70 56	29·70 29.74
Monday . . 2	63 54	29·74 29·76
Tuesday . 3	46 64	29·82 29·80
Wednesday 4	from 54 to 70	29·80 to 29·82
Thursday . 5	50 66	29·80 29·69
Friday . . 6	51 63	29 58 29·39
Saturday . 7	55 63	29.41 29·26
Sunday . . 8	60 51	29·12 29·44
Monday . . 9	46 53	29·12 29·38
Tuesday . . 10	37 55	29·61 29·36

Wind, N.W. on the 27th, 28th, and 29th; on the 30th, S.W. and N.W.; Oct 1st, W. by S.; 2d, S.W. and N.W.; 3d and 4th, S.W.; 5th, S. and S. by E.: 6th, 7th, and 8th, S.W.; 9th, N. by W. and W. by S.; 10th, W. by S. and S. by W.

The 27th, 28th, and 29th, generally clear. 30th, cloudy, with rain. Oct. 1st, clear. 2d, rain in the morning, afternoon clear. 3d, generally cloudy. 4th and 5th, clear. 6th, cloudy, with a little rain. 7th, showery. 8th, generally cloudy. 9th, generally cloudy, rain in the morning. 10th, morning clear, afternoon cloudy, with rain.

Ran fallen, 1 inch, and ·59 of an inch.

Charles Henry Adams.

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, OCTOBER 20, 1843.

GULSTONIAN LECTURES,

Delivered at the College of Physicians, February, 1843.

By George Budd, M.D. F.R.S.

Professor of Medicine in King's College, London.

Lecture III.

In my last lecture, I considered the causes of suppurative inflammation of the liver. I shall now speak of the morbid appearances produced by this form of inflammation, and of the symptoms to which it gives rise.

The earliest perceptible change in the texture of the liver from suppurative inflammation, is redness—a redness usually brighter than that of simple congestion—and softening.

This was the earliest change observed by Cruveilhier in his experiments of injecting mercury into the mesenteric veins of dogs. When the dogs died before sufficient time had elapsed for the formation of pus, the mercury was found disseminated through the liver, and each globule surrounded for a short distance by hepatic tissue of a bright red colour and softened. In the human subject, in almost all cases of abscess of the liver speedily fatal, the hepatic tissue about the abscess is of a bright red, and softened. This preliminary stage in which the substance of the liver is red and soft, is, however, often of very short duration. The inflammation soon passes, in some cases in a few days only, to suppuration and abscess. Dr. Stokes has noticed a stage, intermediate between red softening and abscess, and analogous to grey hepatisation, or purulent infiltration, of the lung, in which the hepatic tissue is soft and yellowish, and leaves a puriform exudation on the scalpel.

I have never found this change in the liver without abscess, nor does Dr. Stokes seem to have done so, but in several instances I have observed it extending a distance of two or three lines about a recently formed abscess. This state of yellow softening or purulent infiltration is, therefore, very transitory, and we may consequently consider red softening and abscess as the anatomical characters of suppurative inflammation of the liver.

Abscesses of the liver vary extremely in size. In some instances they are no larger than peas, while in others they attain an extraordinary volume. In one instance I estimated the quantity of matter in an abscess of the liver at two quarts. A case is given by Annesley, in which an abscess in the liver contained ninety ounces of matter; and one still more extraordinary is mentioned by Portal, in which the matter was estimated at the incredible quantity of twelve pints. These large abscesses seem, in most cases, to be formed by the union of smaller ones.

The matter in an hepatic abscess is white or yellowish, and precisely like the pus of a phlegmon. It is free from odour, unless it be in close proximity to the lung, when it sometimes becomes decomposed and fœtid, perhaps from permeation of air.

Many of the old writers describe the pus in abscess of the liver as being of a red or claret colour; but this description is incorrect. In all the abscesses of the liver that I have examined the pus was precisely like that of a phlegmon. The error of the writers who have described it as being reddish, resulted, I imagine, from their having met with a case in which the abscess opened into the lung, and in which the pus, in its passage through the lung, became mixed with blood and broken down pulmonary tissue. They described the matter *expectorated*, and not the matter contained in the abscess. It is not very uncommon for an abscess of the liver to open into the lung. I have met with several instances of the kind, and in all of them the matter expectorated was of a dirty-red, or

brownish, pus. The colour was acquired in its passage through the lung. The matter in the abscess was yellowish or white.

In cases that prove speedily fatal, we find the abscess bounded simply by red and softened hepatic tissue; but in others, it is lined by a false membrane or cyst. The structure of the cyst varies very much in different cases,—depending in some degree, perhaps, on the general condition of the patient, but chiefly on the date of the abscess and on its size. In small abscesses, and in abscesses recently formed, the pus is surrounded by a layer of albuminous matter, a line or two in thickness, resembling concrete pus, and beyond this the hepatic tissue has its natural texture; while in old abscesses of large size the cavity is bounded by a dense grey substance, like cartilage, three or four lines in thickness, and the hepatic tissue, for a line or two even beyond this, is pale and condensed, obviously in consequence of pressure.

The following seems to be the mode in which these cysts are produced. At first, the pus becomes bounded by a layer of concrete albuminous matter. The abscess then acts as a foreign body, causing pressure on the surrounding parts, and an inflammatory action which leads to the effusion of fibrine. The fibrine, becoming organized, forms the cartilaginous layer I have described.

An abscess once formed in the substance of the liver may have various issues. The abscess may burst into the cavity of the peritoneum, causing inflammation of that membrane, which proves rapidly fatal. But this seldom happens. In a great majority of instances, when the matter gets near the surface of the liver, adhesive inflammation is set up in the portion of peritoneum immediately above it, and lymph is poured out, which glues the liver to adjacent organs—the abdominal parietes, the diaphragm, the stomach, the duodenum, the colon, according to the seat of the abscess—and the matter is discharged, not into the cavity of the peritoneum, but outwards, or into the lung or pleura, or the different portions of the intestinal canal just specified.

But the abscess admits of another termination—the pus may be absorbed or discharged through the gall-ducts, the cavity of the abscess contract, and its place be marked by a dense stellar cicatrice.

M. Louis, in a paper he published some years ago on abscess of the liver, states that he has never met with cicatrices in the liver, and seems to doubt the curability of an hepatic abscess in this way. If he had consulted the splendid work of Annesley, his doubts would have been removed. He would there have seen more than one plate exhibiting cicatrices of the liver, the consequence of abscess. I have frequently observed the capsule drawn in and puckered over an hepatic abscess—no doubt, from partial absorption, or discharge, of its contents; and I have in several instances found the capsule so drawn in and puckered over a stellar cicatrice—but only in one instance have I had an opportunity of observing in the same subject the different stages of the process. This was in the person of my late colleague, Mr. Lawson, consulting surgeon to the Dreadnought, who died two years ago, of Bright's dropsy.

In early life he had been much in India, but returned twelve years ago, and was soon after appointed resident surgeon to the Dreadnought. He continued in this office several years, and then settled in the city. His health, if not good, rarely caused interruption of his business. He had a strong impression that he had some disease of the liver, but few of his medical friends thought so. He had no pain in the side, and his complexion was remarkably clear.

The examination was made by Mr. Busk, in presence of Dr. Bright and myself. The liver had no unnatural adhesions, and presented no traces of inflammation of the capsule, but was deformed by deep fissures across its surface. On cutting across these fissures, we opened small abscesses lined by a thin false membrane. There were a great number of these abscesses, but they were all small: not one was larger than a filbert. In a few places, instead of an abscess, we fouud a small stellar cicatrice, of white, cartilaginous, substance.

The capsule and the peritoneum covering the liver had undergone no change of structure. They were merely drawn in by the contraction of internal parts. The fissures on the surface were not cicatrices, but the effect of cicatrices situated deeper in the hepatic tissue.

As Mr. Lawson had no acute affection of the liver after his return from India, the abscesses must have been of more than ten years' standing.

Abscesses are found in livers of every shade of colour that can be produced by variation in the quantity of blood and in the quantity and quality of the bile. In one case I found the organ of a pale fawn colour; in another, of a dark olive. In subjects dead of chronic dysentery, the liver is usually pale, from its containing but a small quantity of blood.

Livers in which we find abscesses are seldom indurated from interstitial deposit and organization of coagulable lymph. The inflammation which terminates in abscess, and that which leads to the effusion of coagulable lymph and induration, or *cirrhose*, are not different in degree merely, but in *kind* also. Abscesses are never found in the *hob-nail* livers of the gin-drinking popu-

lation of our large towns; and it happens seldom, and then I believe only by coincidence, that there is much induration in the livers of persons who return from India with abscess.

It is now time that I should speak of the *symptoms* of suppurative inflammation of the liver.

In most works on medicine these have been described as being much more uniform than they really are. A picturesque group is sketched, which it seems very easy to identify; but in actual practice it is far otherwise. The physicians who have had most experience in this disease confess their inability, in many cases, to distinguish it from other diseases of the liver, and in some cases even to pronounce that the liver is the seat of disease at all. Here, as in the diseases of other internal organs, our diagnosis will be much aided by knowledge of the circumstances under which the disease arises. This knowledge will make us observant of symptoms which would otherwise escape our notice, and will enable us to interpret them rightly.

The symptoms are most obvious, and most in accordance with the descriptions usually given, when the inflammation is caused by a blow, or some direct injury from without. The injury is usually done to the convex surface of the liver, and the local symptoms are well marked. There is pain and tenderness in the region of the liver, and a sense of fulness and resistance under the false ribs from increased size of the organ. The liver becomes enlarged, and if the abdomen be flaccid and the intestines empty, its edge can be felt some inches below its natural limit. The secretion of bile may be suppressed or deficient, and the patient jaundiced.

In addition to these symptoms, which may be called *special*, from their pointing to the liver as the seat of disease, there soon appear, as in simple inflammation of other organs, the general symptoms of inflammatory fever: the pulse is frequent and full; the skin hot; the tongue furred and yellowish; the appetite gone, or much diminished; the patient is thirsty, and there is occasionally vomiting of bilious matter.

These general symptoms, together with the special symptoms—pain and tension in the region of the liver, and jaundice—occurring after an injury to the side, are perhaps, in the absence of evidence of disease of the lung or pleura, sufficient to characterise suppurative inflammation of the liver.

But, as I have before remarked, the liver is so well shielded by the ribs, that the disease is seldom caused in this way. It occurs much more frequently after surgical operations and injuries done to other parts of the body, from suppurative inflammation of some vein, and the consequent contamination of the blood by pus.

In such cases the general symptoms do not aid our diagnosis. There is already high fever, which rapidly assumes a typhoid character—the consequence of the contamination of the whole mass of blood, and of the various local inflammations to which this gives rise.

We can only infer that abscesses are forming in the liver by the occurrence of special symptoms—pain in the region of the liver, and jaundice—in the midst of the general disorder. But these special symptoms do not exist in all cases. There may be no jaundice; and pain even may be wanting; or the typhoid state into which the patient falls may prevent his distinctly perceiving or expressing it. In such cases the abscesses in the liver can be discovered only after the death of the patient.

In the same way, when inflammation of the liver occurs during the acute stage of dysentery, or on a recurrence of acute symptoms in chronic dysentery, the general symptoms do not aid us in discovering it, because they are fairly attributable to the primary disease. Our diagnosis must be founded on local symptoms chiefly—pain and tenderness referrible to the liver, tension in the right hypochondrium, and jaundice. Our knowledge of the connection between the two diseases enables us to attach due importance to these symptoms, and ascribe them to their actual cause. Pain and tenderness in the region of the liver, slight increase in its volume, and jaundice, which, in other circumstances, might excite little alarm, and be attributed to their most frequent cause—inflammation and obstruction of the gall-ducts—when they occur in the course of dysentery, will lead us to dread suppurative inflammation and abscess.

But these special symptoms are far from being all present in every case; and in some cases they are entirely wanting. In the autumn of 1839, I had a patient in the Dreadnought, who presented merely the symptoms of irritative fever. He was not jaundiced, and made no complaint of pain or tenderness. He died, and I found, what I did not at all expect, a recently formed abscess, containing more than a pint of matter, in the centre of the liver.

Andral, Abercrombie, and indeed all writers who have published a series of cases of suppurative inflammation of the liver, have noticed the same fact—that occasionally, in this disease, the patient has no symptoms immediately referrible to the liver, and presents merely the signs of continuous fever.

Annesley says, "The supervention of abscess of the liver (in dysentery) is often not manifested by symptoms of a decided

nature." "The formation of matter may commence and terminate without the appearance of any of those signs on which the inexperienced are taught to rely." In another place he says, "When the disorders of both viscera are nearly coeval, the inexperienced observer may not detect the presence of biliary derangement until the disease is hastening to a fatal termination, and unequivocal signs of abscess are present. In cases of this description, the violence of the dysenteric symptoms absorbs the whole attention of both patient and practitioner, and the complication is overlooked."

The presence or absence of the symptoms directly referrible to the liver depends chiefly on the *situation* and *extent* of the part of the liver inflamed. These symptoms are, as I have said, fulness of the right hypochondrium, from enlargement of the liver; pain or tenderness; and jaundice.

The degree of enlargement must evidently depend, in some measure, on the *extent* of the part inflamed. If only a small portion of the liver be inflamed, the inflammation, though attended with considerable distension of vessels, may run through all its stages without producing any enlargement of the organ discoverable by touch. But in this kind of inflammation there is seldom, I believe, much increase of volume even of the part inflamed. Enlargement of the liver is much more common in adhesive inflammation; that is, in inflammation which terminates in effusion of coagulable lymph, and causes chronic induration, or cirrhose. This kind of inflammation, at least when produced by spirit-drinking, usually involves the entire organ, and, apparently by causing an interstitial deposit of lymph, often much increases its size; while suppurative inflammation is, as we have seen, generally limited to a small part of it; and before pus is formed even this part may be little, perhaps not at all, increased in volume.

The circumstance that suppurative inflammation is generally partial, serves also to explain the occasional absence of *jaundice*. A portion only of the liver is inflamed; and as any part can perform its function independently of the rest, the sound parts may be adequate to free the blood of the principles of the bile.

The presence or absence of *pain* seems to depend, not so much on the *extent*, as on the *situation*, of the portion inflamed. As long as the inflammation is confined to deep-seated parts, and is not sufficiently extensive, or attended with sufficient congestion, to cause much enlargement of the liver and stretching of its capsule, there is little or no pain. The substance of the liver, like that of the lungs and other parenchymatous organs, is little susceptible of pain. The sharp and severe pain that frequently attends inflammation of them has its seat in their fibrous or serous covering.

The occasional absence of symptoms directly referrible to the liver is not, then, so inexplicable as might at first appear. It is satisfactorily accounted for by the circumstance, which dissection has already disclosed to us—that suppurative inflammation is generally partial, and often involves only the *substance* of the liver, whose natural sensibility is slight.

When inflammation of this character involves all the secreting substance of the liver, there is deep jaundice, and the patient dies from oppression of the functions of the brain. A case, which seems to have been one of this kind, is given by Andral.

When an abscess in the liver has become encysted, if small and deep-seated, it causes little constitutional disturbance, and may give rise to no symptoms by which its presence can be discovered. I have already mentioned the case of the late surgeon to the Dreadnought, who, for ten years before his death, had his liver studded with abscesses, but was still competent to all the duties of his profession. I have no doubt that many of the old East Indians, who have suffered from dysentery, and who return to this country with sallow countenances and impaired health, are labouring under abscess of the liver.

But besides the general symptoms of fever, and the special symptoms—pain and tension in the right hypochondrium, and jaundice—which occur in well-marked cases of suppurative inflammation of the liver, and which, in conjunction with the circumstances in which suppurative inflammation is known to arise, are perhaps sufficient to characterise it, there are some other symptoms occasionally observed, which cannot be referred to either of the preceding heads, and which frequently continue after the feverish symptoms are past. These symptoms are, pain in the right shoulder; vomiting; a short, dry cough; and permanent rigidity of the muscles of the abdominal parietes, but especially of the right rectus muscle.

Pain in the right shoulder has long been noticed, indeed from the time of Hippocrates, as an occasional attendant on hepatic disease; and considerable importance has been attached to it as a sign of hepatic abscess. M. Louis, in his paper on Abscess of the Liver, states that none of his patients (they were five in number) had any pain in the shoulder; and he hesitates to believe that this symptom is really referrible to disease of the liver. He conjectures that, when present, it may depend on concomitant disease of the lung or pleura. Nearly the same opinion has been expressed by M. Andral.

Pain in the right shoulder is, indeed, far

less frequent in cases of abscess of the liver than is generally imagined; but it existed in five of the fifteen fatal cases I had to treat at the Dreadnought, and in some of these cases there could be no doubt that the pain in the shoulder was dependent on the disease of the liver.

In the first of these five cases (case 5 of the table), there was a small abscess on the convex surface of the right lobe, and the peritoneum covering the abscess adhered, for the space of a shilling, to the reflected layer of peritoneum. There were some old adhesions of the lung to the pleura costalis, but no trace of recent pleurisy. Both lungs were pale and perfectly healthy.

In another of these cases (case 8 of the table), in which the abscess was on the convex surface of the liver, and formed a prominent tumor, the pain of the shoulder was so severe as to cause the patient to moan. The pain continued extremely severe for a long time, and at length was relieved on our opening the abscess.

In a third case (case 9 of the table), where the abscess likewise formed a prominent tumor, the patient complained of an aching pain in the right shoulder, extending to the right scapula, and up the right side of the neck.

In a fourth case (case 12 of the table), the pain in the shoulder varied in intensity with the pain in the right side. When the side was easy, the shoulder was easy also. The two pains were evidently related. In this case there were five or six abscesses of various sizes in the liver—one opened into the lung, another was on the convex surface of the right lobe.

In the fifth case the abscess was likewise on the convex surface of the right lobe. There was no recent inflammation of the lung or pleura.

In two or three of these cases the pain in the right shoulder continued for months, and in all of them it was associated with pain in the situation of the abscess.

In all the cases the abscess was on the convex surface of the right lobe, and adhesions had formed between the peritoneum covering the abscess, and the layer of the peritoneum reflected over the diaphragm or abdominal parietes.

These cases tend to bear out a statement made by Annesley, that pain of the right shoulder, when present, is a sure indication that the disease is in the right lobe, and they explain how it happened that pain in the right shoulder was supposed to be so much more frequently associated with abscess of the liver than it really is. Pain in the right shoulder occurs chiefly, if not exclusively, in those cases in which the abscess is situated on the convex surface of the right lobe. Now, before the cultivation of morbid anatomy, it was only when the abcsess was so situated, and when it formed a prominent tumor, that its existence was recognised. The ancients, therefore, observed pain in the shoulder in a great proportion of the cases in which they discovered the existence of hepatic abscess; whereas the frequent dissections of late years have taught us that abscess is more frequently seated deep in the substance of the liver than on its surface, and that pain of the right shoulder is more frequently absent than present.

The pain is usually described as a gnawing, aching pain, about the top of the shoulder. There is no swelling or redness of the shoulder, and the pain is not much increased by pressure on it—sometimes, indeed, the pain is relieved by holding or pressing the shoulder—but it is often much increased by pressure on the liver. The pain is, in fact, as it has always been represented to be, a *sympathetic* pain, like the pain of the knee from disease of the hip.

The cough and vomiting are of the same kind. Irritation of the liver, like irritation of the stomach, produces a short, dry, sympathetic cough; and, like irritation of most of the abdominal viscera, it may occasion vomiting.

M. Louis has not only thrown discredit on pain of the shoulder as a symptom of hepatic abscess, but has advanced similar opinions respecting the vomiting and cough. The *vomiting* he supposes to arise from inflammation of the mucous membrane of the stomach; and the *cough* to be the consequence of bronchitis. With respect to the cough M. Andral has concurred in the opinion of M. Louis.

I have had several opportunities of satisfying myself that the opinion of these eminent pathologists is incorrect; and that the cough and vomiting, so frequently observed in abscess of the liver, do not depend on any affection of the lungs or stomach, but that they are what I have stated them to be, sympathetic affections solely dependent on irritation of the liver.

In the autumn of 1837, a young man (case 4 in the table), was admitted into the Dreadnought, immediately on his arrival from Calcutta. He was much emaciated, and stated that he had been ill thirty days of fever, and that during the last ten days he had vomited everything he had taken. His belly was much drawn in, and the parietes were extremely rigid, but there was no tenderness on pressure. He was somewhat thirsty, but afraid to drink, on account of the vomiting it immediately excited. My impression was that his complaint was gastritis, and I prescribed for him accordingly. The symptoms increased, and at the end of a fortnight I could get him to take little besides toast and water, which he

sipped rather than drank. He died about a month after his admission to the Dreadnought. The stomach was found apparently healthy, but the liver was the seat of an enormous abscess.

In this case, I have mentioned that the abdominal parietes were in a constant state of rigidity; without pain or tenderness. I remarked the same symptom in several of the other cases. In one of them (case 9 of the table), it was very striking; the abdominal parietes were hard and boardy, especially on the right side, with the skin loose over them.

From an article in a recent number of the British and Foreign Medical Review, I find this symptom was noticed by the late Mr. Twining, and some other surgeons in India, and considered as one of the surest indications of deep-seated abscess of the liver. Like the other symptoms with which I have associated it, it is a purely sympathetic affection. It is met with in other diseases besides abscess of the liver. I found it in a very striking degree in a man who had cancerous ulceration of the stomach, eating into the liver, to which the stomach adhered.

These sympathetic affections—the pain in the right shoulder, the vomiting, the cough, the rigidity of the abdominal muscles—are of little value in the early stage of suppurative inflammation, because they are then of more doubtful import, and are in some degree masked by the general symptoms of fever; but when they exist after the acute stage has passed and the fever has subsided, and present the characters I have noticed—when the pain is seated about the top of the shoulder, is unattended by redness or swelling, and is not much increased by pressure on the shoulder, but by pressure on the side —when the cough is short and dry, and cannot be explained by the condition of the lung—when the vomiting occurs immediately after food or drink has been taken (which is a general character of sympathetic vomiting) —when, in fact, these symptoms have the characters of sympathetic affections, they are strong indications of the existence of an hepatic abscess.

The symptoms I have enumerated are almost the only symptoms of suppurative inflammation of the liver, or of its termination—abscess—while the abscess is confined to the substance of the organ.

But when the abscess is large, and near the surface, it may, according to its situation, discharge itself in various ways. If situated on the outer surface of the liver, it may either burst into the cavity of the peritoneum, or, by means of adhesions, make its way through the abdominal parietes; if it be situated on the upper part of the liver, in contact with the diaphragm, it may perforate the diaphragm and burst into the cavity of the pleura, or adhesions may form between the lung and the portion of diaphragm covering the abscess, and the abscess may open into the lung and be discharged through the bronchial tubes; if the abscess be near the edge, or on the under surface of the liver, adhesions may form between the peritoneum covering it and the stomach, duodenum, or large intestine, and the matter be discharged through the intestinal canal.

There will, of course, be a variety of symptoms indicative of these several results.

If the abscess burst into the cavity of the peritoneum, there will be sudden accession of pain, vomiting, and all the symptoms of peritonitis from perforation. The patient will speedily fall into collapse, and survive at most a few days.

If, however, the matter discharge by oozing merely, it may not become diffused over the surface of the peritoneum, to excite general peritonitis. It will spread over the liver, and will be limited by adhesions, so as to form a circumscribed abscess in the cavity of the peritoneum. This mode of termination is noticed by Cruveilhier, and happened in two of the cases I treated at the Dreadnought.

If the abscess open into the stomach, there will be sudden vomiting of purulent matter; if into the intestines, sudden diarrhœa, with discharge of pus; and, in either case, the occurrence of these symptoms will be attended by subsidence of the tumor, if any exist.

If the abscess perforate the diaphragm, it may open into the cavity of the pleura, and excite suppurative pleurisy; but this rarely happens. In almost all cases in which the abscess is working its way through the diaphragm, it excites inflammation of the pleura immediately above it, and adhesion, which is sometimes singularly limited, takes place between the diaphragm and the lung. The abscess then opens into the lung, and the matter is discharged through the bronchial tubes. When this happens, it is marked by very characteristic symptoms—by a new train of stethoscopic phenomena, which I need not stay to notice, and by the sudden expectoration of a dirty-red, or brownish, puriform matter. I have already noticed this colour, which arises from the pus in its passage through the lung becoming mixed with blood and broken-down pulmonary tissue. There is no expectoration like it in any disease of the lung itself, and I believe that its appearing is pathognomic of abscess of the liver, or at least of abscess perforating the lung. I observed it in sveral instances in the Dreadnought, and more than once was led by it to detect an abscess in the liver, of which I had previously no suspicion. When the abscess is large, this matter may continue to be spit up for a great length of

time. It generally comes up very easily, in some cases by mouthfuls, almost without effort on the part of the patient.

When an abscess of the liver opens into the intestines, or into the lung, all the matter may be discharged, the cavity may close up, and the patient recover. I have met with one instance in which a patient, who had all the symptoms of abscess of the liver discharging through the lung, so far recovered that he left the hospital apparently well. But such a happy result is very rare, and happens, I imagine, only when the abscess is small, or recently formed. In the majority of cases the patient dies, exhausted by protracted suppuration and hectic.

The protracted suppuration depends on the walls of the abscess being firm and unyielding. The hepatic tissue, and the hard gristly substance that always surrounds an old abscess of large size, cannot contract so as to close the cavity, which must consequently continue to be filled with pus. The case is analogous to those cases of old empyema in which the lung is condensed and irrecoverably bound down against the vertebral column. In such cases, the fluid, if serous, continues to be absorbed as long as the contraction of the ribs, the encroachment of the opposite lung, the dilatation even of the bronchial tubes of the compressed lung, continue to diminish the cavity of the affected side; but when all these means have attained their limit, and the cavity can be no farther diminished, an end is put to the absorption of the fluid. It is a physical impossibility that a drop more of the fluid can be absorbed. In the same way, in old abscesses in the liver, if the hardened tissue about the abscess cannot contract so as to close the cavity, the cavity must continue to be filled by pus.

It is, then, to the unyielding nature of the walls of the cavity that we must ascribe the protracted suppuration and the fatalness of hepatic abscess, even in cases in which the free discharge of the pus would seem to promise a favourable issue. The fatalness has no relation to the outlet by which the matter is discharged. I have met with several cases in which the abscess opened through the abdominal parietes, and all of them proved fatal; so that it seems doubtful whether such an opening is more favourable than one into the intestine or lung.

The abscess, if large, may discharge through more outlets than one. In one of the cases I treated at the Dreadnought, the abscess discharged first through the lung, and afterwards through the abdominal parietes also. The reason of this is, that from the sides of the cavity not collapsing, the abscess is not emptied through the first opening.

The treatment of suppurative inflammation of the liver is very unsatisfactory. I shall detain you only to make a few remarks on two points connected with it.

The first is the abuse of mercury.

It has been well observed by Abercrombie—"In the liver diseases of this country mercury is often used in an indiscriminate manner, and with very undefined notions as to a certain specific influence which it is supposed to exert over all the morbid conditions of this organ. If the liver be supposed to be in a state of torpor, mercury is given to excite it; if in a state of acute inflammation, mercury is given to moderate the inflammation and reduce its action."

This vague and indiscriminate use of mercury has resulted from its unquestionable efficacy in some derangements of the liver, and from the difficulty of distinguishing the different disorders of this organ. In doubt as to the real nature of the malady, the physician is naturally anxious to give his patient the chance of a remedy that occasionally produces strikingly beneficial results; and often, in so doing, aggravates the disorder it is his object to relieve.

This misapplication of mercury will continue until the diagnosis of the diseases and derangements of the liver is more sure, and physicians have ascertained those in which mercury has a curative influence. There can be no doubt that much of our uncertainty as to the action of medicines depends on our calling by the same name, and treating in the same manner, diseases that arise from different causes, and are essentially different in their nature.

It seems to me that mercury is peculiarly unsuited to the disease we have been considering—suppurative inflammation of the liver.

One objection to its employment in this disease is the short time allowed for its action. When the inflammation is excited by the presence of pus in the blood, and in all probability when it occurs in the course of dysentery, it passes on to suppuration in two or three days; and when suppuration has taken place, and abscess formed, it is agreed by all that mercury not only does no good, but the singular fact seems established, that in whatever quantity we give it, it fails to produce its usual constitutional effects. Annesley says, "There can be no doubt that the system will not be brought under the full operation of mercury, or that ptyalism will not follow on the most energetic employment of this substance, when abscess exists."

He repeats this opinion again and again, and even considered resistance to the action of mercury as a proof that abscess had formed in the liver. It is only, then, before suppuration has taken place that mercury can have any beneficial influence, and during this time the system, from the presence of

high fever, is little disposed to be affected by it.

The next point I have to say a few words on is the danger of opening abscesses of the liver.

One source of danger noticed by Annesley, Dr. Stokes, and many other writers, arises from the difficulty of diagnosis of an hepatic abscess, and our liability to mistake a distended gall-bladder for it. Such a mistake is almost immediately fatal to the patient. A distended gall-bladder is seldom adherent to the abdominal parietes, and if it be punctured, the bile escapes into the cavity of the peritoneum, the patient is seized with vomiting, falls rapidly into collapse, and generally dies at the end of a few hours. Two cases of this kind are alluded to by Dr. Stokes in the 5th vol. of the Dublin Hospital Reports, and many others are on record. This source of danger may, however, be avoided by attention to the situation and character of the tumor. The tumor formed by a distended gall-bladder is globular, and circumscribed, and hard, and equally resisting in every part, while the tumor from abscess is more diffused, and is soft and fluctuating at its summit, while its base is hard and resisting.

A source of far greater danger is the circumstance I noticed when speaking of the morbid anatomy of abscess of the liver—namely, that the inflammation which leads to abscess is often confined to the substance of the organ, and does not involve its capsule. As the abscess approaches the surface, adhesive inflammation of the peritoneum immediately above it often takes place, and a small quantity of lymph is poured out, which causes adhesion between the wall of the abscess and the parts with which it is brought into contact. These adhesions are often singularly limited. Sometimes they do not form at all, and, as I have before remarked, the abscess bursts into the cavity of the peritoneum, causing speedy collapse and death. By opening an abscess of the liver before adhesions have formed, we are directly instrumental in bringing on this fatal issue; the pus escapes into the sac of the peritoneum, and the patient dies in a few hours, obviously from the effects of the operation.

I would, then, never recommend opening an abscess of the liver until I was assured, by a circumscribed œdema, or a slight blush on the skin, that union had taken place between the integument and abscess. When these signs are wanting, and the skin has its natural appearance and colour, we can never be sure that adhesions have formed, and if we thrust a knife into the abscess, we run the risk of discharging the matter into the cavity of the peritoneum.

Dr. Graves has ingeniously recommended a mode of proceeding by which he supposes this danger may be obviated. It is, not to open the tumor at once, but to make an incision across the most prominent part of it through the abdominal muscles, so as to reach the peritoneum without dividing it, and to fill up the wound with a pledget of lint. The object of this is to excite circumscribed inflammation of the peritoneum which may produce adhesion between the reflected layer of the peritoneum and the layer covering the abscess. The abscess is then allowed to open of itself. I have seen this operation performed twice, but with very unsatisfactory results. There is, indeed, a third source of danger, which has not been noticed by the writers to whom I have referred, but which is, I think, more to be dreaded than those I have already mentioned. It is, that by the entrance of air into the wound, a fresh inflammation may be excited, which may lead to gangrene, and speedily carry off the patient. This circumstance happened in one of the cases I treated at the Dreadnought. (Table, case 6). An abscess that pointed outwardly was opened with considerable temporary relief to the pain which the patient suffered in the side and shoulder. But the discharge became fetid and dark, of the colour of coffee-grounds: the patient sunk and died at the end of a week. The walls of the abscess, and the hepatic tissue immediately around them, were found in a state of gangrene.

A similar case is related by Cruveilhier, in Liv. 40 of his Anat. Pathologique.

I have as yet spoken only of inflammation involving the secreting substance of the liver. There are other forms of suppurative inflammation of this organ, but they are much more rarely met with.

1. One of the most interesting of these is where suppurative inflammation is set up in the interior of an hydatid cyst, converting it into an abscess. This, considering the rareness of hydatids in the liver, is not of unfrequent occurrence. I have met with one instance of it. Three are recorded by Andral, and two or three by Cruveilhier. The fragments of hydatids were found floating in pus.

Cruveilhier has made the important remark, that while the fluid in hydatid cysts in their *healthy* state, if one may be allowed the expression, is always limpid and colourless, yet in all those he examined which had been converted into an abscess, the pus had an orange, or greenish, hue. He believes that this colour is due to the presence of bile; and that the entrance of bile into the cyst is the most common cause of the suppurative inflammationthat transforms it into an abscess. I have little doubt that this explanation applies to the majority of such cases, but we must also admit that suppura-

tive inflammation of the cyst may be excited in other ways. In one of the cases given by Andral, the pus was quite white.

2. Another form of suppurative inflammation of the liver is, where the pus is not collected into a circumscribed abscess, but diffused through the cellular tissue that surrounds the portal vein and the accompanying artery and duct.

Cruveilhier mentions the case of a man who died of gangrenous inflammation of the cellular tissue of the pelvis, the consequence of extravasation of urine. He found pus in the liver, not collected into an abscess, but diffused through the cellular tissue that enters into the portal canals. The most probable explanation of this is, that the urine was absorbed, conveyed to the liver, and some of its principles extravasated in the cellular tissue in the portal canals.

I have said that in ordinary cases of abscess of the liver, the gall-bladder, and ducts, and capsule, are seldom affected, excepting secondarily; and I assigned as a probable reason for this, that suppurative inflammation of the liver is usually caused by some contamination of the portal blood, which is not distributed to these parts.

3. Suppurative inflammation may, however, occur in the gall-bladder or excreting ducts, or in the capsule, *primarily*, and with similar disease of the secreting substance of the liver.

Numerous instances are recorded of suppurative inflammation of the mucous membrane of the gall-bladder, from the irritation of calculi, or otherwise, and some instances where, from closure of the cystic duct, the gall-bladder was converted into an abscess.

A case is given by Cruveilhier, in which the extremities of the gall-ducts were dilated into small cavities containing puriform mucus; the consequence, it would seem, of obstruction of the hepatic duct by a gall-stone.

4. There is still another variety of suppurative inflammation of the liver; namely, suppurative inflammation of the capsule, or of the peritoneum covering it. This may take place without suppurative inflammation of the secreting substance of the liver, and at first, without inflammation of the rest of the peritoneum. But when pus has formed on the surface of the liver, it becomes diffused over the surface of the peritoneum, and causes general and rapidly fatal peritonitis, just as when discharged by the bursting of an abscess. A case of this kind is given by Andral. (Clin. Méd. iv. 310). The liver was of its natural size, but its tissue much softened. It would seem that in such cases the material cause of the inflammation, if such exist, is conveyed by the arterial blood.

CLINICAL REPORT OF CASES

TREATED AT THE GLASGOW EYE INFIRMARY.

By William Mackenzie, M.D.

Second stage of glaucoma affecting each crystalline lens — Slow advance of the disease — In right eye combined with incomplete amaurosis — In left uncombined — Lenses divided and absorbed — Recovery of good vision in left eye — Remarks on the several stages of glaucoma.

Case.—No. 10804, January 14th, 1841.—Robert Shaw, a weaver, aged 56. Lenticular opacity in each eye, of a pale muddy greenish hue, confined apparently to the central and posterior portions of the lenses. Vision of right eye, in which the opaque appearance is most advanced, so much impaired, that he cannot distinguish objects with it. Vision of left eye also imperfect, but with it can still distinguish the fingers. Pupils of natural size; their motions limited and sluggish. Eyeballs of natural consistence; deep set in orbits. Sight began to fail four or five years ago, after having had typhus fever, followed by erysipelas. Has never been myopic nor presbyopic, as far as he knows.

Extr. Belladon. ad palpebr.

15th.—Since the application of the belladonna, thinks his vision less distinct.

21st.—Pil. Subm. Hydr. ter ind.

Feb. 1st.—With left eye can discern a character an inch long. Right eye almost insensible, except to light and shade. Opacity of lenses so far advanced that no inverted image is visible, on examining eyes catoptrically.—Omit. Pil.

10th.—Vesicat. parv. ad tempora.

15th.—Thinks his vision declining.

19th.—Sol. Iodid. Ferr. gtt. x.; ter ind. ex cyath. aq.

29th.—Vomits the drops.—Omit. Med.

May 4th.—Pupils again dilated by belladonna. Vision slightly improved.

A blue belladonnam.

9th.—Vin. Antim. gtt. x. ter ind.

June 15th.—Is troubled with catarrhal ophthalmia.

Ung. Pr. Rub. et Collyr. com.

July 8th.—Pupils again dilated by belladonna. Vision worse.

9th.—Pil. Calomel. et Op. i. o. n.

Aug. 4.—Omit. Pil.—Utatur Velamine.

Oct. 5th.—Ung. Pr. Rub. o. n.

Nov. 22d.—Collyr. c. Vin. Bellad.

Jan. 23, 1842.—Slight catarrhal ophthalmia of both eyes.

Cont. Ung. et Collyr.

Sept. 12th. — Opacity, still of the same muddy green colour, has slowly advanced towards the iris. Has been till lately engaged as a letter of houses, but cannot see to continue this employment.

28th.—Right pupil being dilated by belladonna, curved needle introduced through sclerotica, and anterior capsule divided.

29th.—An attack of pain last night, for which he was bled, and had a calomel and opium pill.

Extr. Bellad. ad palp. dextr.—Linteolum aq. frig. madefactum super ocul. dextr. —Cont. Pil. m. et. v.

Oct. 1st.—Omit. Pil.

Nov. 6th.—Curved needle again introduced through right sclerotica, and capsule and lens divided.

7th.—Was bled this morning, on account of pain in right eye, and had four grains of calomel and one grain of opium.

Sumat Sulph. Magnes. ℥j.

17th.—A very fine straight needle introduced through left sclerotica, with the view of displacing the lens, in the mode recommended by Mr. Morgan, in Guy's Hospital Reports, Vol. vii. p. 461. This not being effected, the anterior capsule was divided, and the needle withdrawn.

Extr. Bellad. ad Palp. Sinistr.

29th.—Pil. Hydr. o. n.

Dec. 3d.—Omit. Pil.

10th.—Division of left capsule repeated with curved needle passed through sclerotica, and the comminution extended partly to the lens.

25th.—Omit. Bellad.

Sulph. Quin. gr. j. ter ind.

Feb. 2d, 1843.—Left pupil being previously dilated by belladonna, capsule and lens again divided with curved needle passed through sclerotica.

Extr. Bellad.—Omit. alia.

14th.—Vision does not improve.

Vesic. pone aures.

May 16th.—Vision much improved since last report.

Aug. 1st.—Left pupil perfectly clear, and vision of this eye good; lower-outer part of right pupil clear; its upper-inner part occupied by an opaque capsular shred. With a $2\frac{1}{2}$ inch convex glass, reads a school testament, with left eye. With right eye, sees a little, when he looks dextrad.

Remarks. — Glaucoma is so called from the greenish appearance which it presents behind the pupil. It is a reflection of the light which has entered the eye, by the central and posterior laminæ of the crystalline lens, arising from these laminæ having lost their natural colour and consistence, and acquired an amber or reddish-brown hue, with an abnormal degree of hardness and dryness.

The history of pathology sufficiently shows that dissection is the only way of discovering the nature of such diseases as cataract or glaucoma. If a cataractous lens is extracted from the eye of a person of 50 or 60 years of age, its superficial laminæ are found to be of an opaque whitish appearance, like half-boiled white of egg, while the rest of the lens is of an amber colour, and rather less opaque than the surface. If a glaucomatous lens is extracted, its superficial laminæ are found to be comparatively transparent, and the departure from the normal state to affect chiefly its central portion. Viewed entire, by transmitted light, it appears more or less amber-coloured throughout. Divided by a section perpendicular to its surfaces, the kernel, and laminæ immediately behind the kernel, are found to be of a reddish-brown colour, in a considerable degree opaque, hard, and drier than the superficial laminæ. The lens, so changed, appeared while in the eye, and viewed therefore by reflected light, to be of a muddy green colour, but this was in a great measure an optical deception; for, taken out of the eye, all greenness is gone, both within the eye deprived of its crystalline, and in the lens under examination. The lens, then, in glaucoma, is in a certain sense dichromatic, like a bit of gold leaf; only that the latter viewed by reflected light is yellow, and green when viewed by transmitted light, whereas the glaucomatous crystalline is the reverse — green when seen within the eye by reflected light, and amber-coloured when seen by transmitted light out of the eye.

In its advanced stages, the disease styled glaucoma involves many other textures of the eye besides the lens, so much so, that Dr. Hays, the American editor of Mr. Lawrence's Treatise on the Eye, remarks, that "glaucoma cannot, strictly speaking, be considered as a disease; the term being applied to a group of symptoms which result from several and very distinct pathological conditions." I cannot see, however, that glaucoma is more objectionable in this respect than hundreds of other nosological terms. In an early stage, glaucoma is often limited to the lens, as it was in Shaw's left eye; or to the retina and lens, as it was in his right eye. It is sometimes the case, as in this individual, that the disease may continue for a number of years, without absolutely destroying vision, or becoming altogether irremediable.

The case of Shaw confirms two statements which I made respecting glaucoma in 1830; the one, that if the lens is removed by operation, the green appearance behind the pupil is lost; and the other, that the removal of a glaucomatous lens improves the vision

of the patient, unless, indeed, he be amaurotic*.

The term *glaucoma* comprehends a series of morbid changes, which in general develops itself slowly, in the course of years, and involves at last all the structures of the eye. I say "in general," for there is an *acute glaucoma*, in which many of the symptoms of the chronic variety are manifested often in a single night's time. The earliest and least important appearance of *chronic glaucoma* is merely a greenish hue, reflected from behind the pupil in the eyes of old people, but which is not necessarily connected with any material deterioration of vision, as is shewn by the liveliness of the iris and the sensibility of the retina. A muddy green colour of the crystalline marks the *second* stage, as in Shaw; and along with this there is sluggishness of the pupil, and more or less obscurity of vision. The consistence of the eyeball is natural. This stage may last for five or six years, or more, vision declining by insensible degrees all the time. An unnatural hardness of the eye, with dilatation of the pupil, a varicose state of the external blood-vessels, and a still more marked loss of sight, are the signs of the *third* stage. In the *fourth*, the crystalline becomes cataractous as well as glaucomatous, opaque, that is to say, on its surface, as well as in its nucleus; it is also augmented in thickness, and pressed through the pupil, till at length it touches the cornea; the sclerotica is thinned, so as to allow the choroid to shine through it, and vision is totally extinguished. In the *fifth* stage, the cornea, pressed upon by the hypertrophied lens, inflames and gives way by ulceration, the lens escapes, and the internal vessels of the eye burst, and bleed through the ruptured cornea. A *sixth* stage presents the eye shrunk and atrophic.

These different stages of glaucoma run insensibly into each other. Although the disease is scarcely at any period of its course under the control of medical treatment, it is frequently arrested spontaneously in one or other of these stages, and makes no farther progress. In Shaw, it stopped, as as it often does, in the second stage; the amber-coloured degeneration proceeding gradually towards the surface of the lens, but the other textures of the eye not becoming involved.

In the first and second stages, glaucoma is generally a disease of the crystalline alone. I say "generally," for sometimes amaurosis accompanies glaucoma from the very commencement. In its advanced stages, it presents symptoms depending on certain morbid conditions of almost all the textures of the eye. The elements, in which glaucoma consists, when far advanced, reside in the lens, the vitreous humour, the retina, the choroid, the iris, the sclerotica, the blood-vessels of the eye, and even in the cornea. The order in which these different parts become affected is not invariably the same, nor the proportions in which they take part in this complex disease.

It is only in the early stages of glaucoma that the catoptrical examination of the eye is of importance. In the first stage, both the deep erect image formed by the anterior capsule of the lens, and the inverted image formed by the posterior capsule, are distinct. Both the images are rather larger than in the healthy eye, and both of them are of a yellowish hue. In the second and third stages the erect image is still larger than it was in its first stage, but its outline is indistinct, so that it appears as a diffused blaze. In the second and third stages, the inverted image is seen for a time, if, by moving the candle to one or other side, it is formed near the edge of the lens, but it appears less and less distinct as it is made to approach the centre of the pupil. At last, as the disease advances, it disappears entirely.

The second stage of glaucoma is the only one in which the removal of the lens is a practice which can be defended. The pale muddy green opacity behind the pupil, more deeply seated than the opacity in ordinary cataract; so that, owing to the transparency of the superficial laminæ of the lens, the iris throws a broader shadow on the opacity than when the surface of the lens is affected; the consistence of the eyeball natural; the iris healthy in texture; the pupil not dilated; no inverted image, while the deep erect image forms a large yellow blaze; vision such as accompanies lenticular cataract; the progress of the disease much slower than that of lenticular cataract, occupying perhaps five or six years, whereas the formation of common cataract is generally effected within as many months; these are circumstances which enable us to pronounce the disease to be lenticular glaucoma in the second stage, and vision likely to be restored by the removal of the lens. This is an important fact, because practitioners are apt to conclude, when they see a green opacity behind the pupil, that the case is one of amaurosis, as well as of change in the refracting media of the eye. Hence patients are left as incurable, to whom the removal of the glaucomatous lens might restore vision. In the cases in question, a careful examination shows that vision is not extinguished, but that the eye retains nearly the same degree of sight as does a cataractous eye; the eyeball is not hard and stony to the feeling, as it is in the third stage, when, to a glaucomatous state of the

* Glasgow Medical Journal, vol. iii. p. 266. Glasgow, 1830.

lens, there is added a dissolution and an accumulation of vitreous humour; the sclerotica is not thinned, so as to allow the choroid to shine through; nor are the external vessels of the eye enlarged and varicose, as in the advanced and hopeless stages of the disease.

It sometimes happens, however, that incomplete amaurosis attends the second stage of glaucoma, as in Shaw's right eye, and then the operation proves fruitless.

In the third stage of glaucoma, the hope of doing any good by an operation is gone; and from the dissolved state of the vitreous humour and varicose condition of the vessels, there is much risk in attempting such a thing.

I have already hinted that the different elements of glaucoma do not present themselves in the same invariable order. The retinal, or amaurotic element, for example, is often the first to attract notice. Weller thinks that it is always the first in the series of morbid changes, for he says, "Primum hujus morbi symptoma visus defectio est, pupillæ color subviridis multo serius demum animadvertitur*." But I believe it were more conformable to the fact to say, that in such instances as Weller has taken for the ground of this remark, an amaurotic eye has become glaucomatous, than that the group of symptoms which constitute glaucoma has originated in the retina.

Amaurosis so generally attends the advanced stages of glaucoma, that it has been presumed always, and in all stages, to do so. Mr. Wardrop even goes the length of calling glaucoma a species of amaurosis. "In some cases," says he, "the vitreous humour acquires a dull greenish colour, accompanied with insensibility of the retina, a species of amaurosis which has generally been called glaucoma†." Shaw's case shews the erroneousness of this view; his left eye was affected with distinct glaucoma, advanced into the second stage, yet the retina proved perfectly sensible.

It is scarcely necessary to remark, that the notion of glaucoma being an opacity of the vitreous humour is incorrect.

In its advanced stages, glaucoma is attended by dissolution of the hyaloid membrane. An inordinate quantity of vitreous fluid renders the eye preternaturally hard to the touch, and by pressure causes pain, photopsia, and destruction of vision. If the pressure is taken off, by puncturing the vitreous humour through the sclerotica, or even by evacuating the aqueous humour through a small opening in the cornea, a transient amelioration of vision, as well as relief from the pain, is sometimes the result. But the aqueous humour, or the fluid which fills the place of the vitreous humour, being speedily regenerated, the pressure returns with its former effects.

The primary cause of glaucoma, from whence the whole series of symptoms springs, is unknown. Beer supposed it to be arthritic inflammation; Taylor a preternatural viscidity of the blood, and a cessation of the circulation through the vessels of the crystalline.

Taylor's notions regarding the seat and nature of glaucoma were much more correct than those of Brisseau, which so long prevailed. He understood it to be a diseased alteration of the crystalline, implicating its colour, transparency, and consistence, and ultimately combining with dilated pupil and amaurosis. He erred in supposing the capsule to be affected. His practice was to depress the lens and capsule, under the circumstances which I have enumerated as characterizing the second stage; or, to use his own words, "where the iris, and immediate organ of sight, maintain their healthful state*."

Operating, then, for the cure of glaucoma is not a new practice. Of late it has been revived in France by Dr. Sichel, who styles the second stage of glaucoma, as above described, *cataracte lenticulaire verte opérable*†.

It is necessary to be aware, that a glaucomatous eye is always very susceptible of suffering inflammation and disorganization, even from the slightest operation which may be practised upon it. Arthritic inflammation, with severe and long-continued pain, closure of the pupil, and total insensibility of the retina, is exceedingly apt to be the result of displacing a glaucomatous lens; while the operation of extraction exposes the eye almost as much to the danger of complete suppuration. Hence the propriety of having recourse rather to the operation of comminuting the centre of the anterior capsule by means of a fine curved needle passed through the sclerotica, and afterwards repeating a cautious division of the lens every six weeks till it is entirely absorbed. A cataractous eye is generally perfectly healthy, except that the lens, and especially its surface, has become opaque, but in every texture of a glaucomatous eye there is a lurking tendency to disease against which we cannot be too much on our guard.

* Icones Ophthalmologicæ, p. 22. Lipsiæ, 1824

† Morbid Anatomy of the Human Eye, vol. ii. p. 127. London, 1818.

* Treatise on the Diseases of the Crystalline Humour, p. 31. London, 1736.

† Annales d'Oculistique, tome v. page 233. Bruxelles, 1841.

MUSCLE A NEURO-MAGNETIC APPARATUS*.

(For the London Medical Gazette.)

The active organs of locomotion, or the muscles, act by contracting or shortening the fibres of which they are composed, under an influence communicated to them, at the instance of the will, through certain nerves — nerves different in nature, you are to remember, from those which communicate between the organs of sense and the brain.

The mechanism by which muscles contract or shorten their fibres is a question which has been much agitated.

The view which I have been led to take is, that muscular fibre consists of a series of pieces in the form of discs, as first pointed out by Mr. Bowman, not immediately adherent to each other, however, but, as I find, held together by an intervening substance, so yielding and elastic as to admit of very close approximation of the discs to each other or their separation to a certain extent.

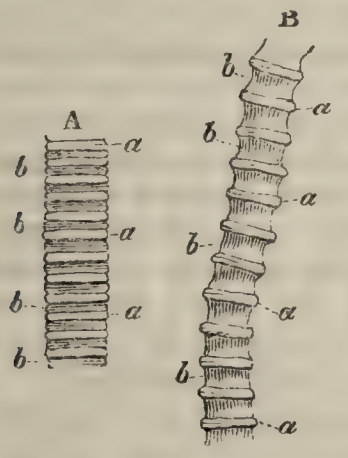

Diagram of the Structure of a so-called primitive Fasciculus of Muscle.

A, the discs closely approximated.
B, the discs separated.
a, discs. *b*, intervening substance.

These discs I consider analogous in their nature to *electro-magnets;* and I propose to call them *neuro-magnets,* inasmuch as the relation of the nervous influence to them appears to be essentially the same as that of the galvanic influence to the soft iron forming common electro-magnets.

The neuro-magnetic discs then composing muscular fibre are of microscopical minuteness, and are arranged so as to operate on each other at very short distances only, and therefore with great power—a power which, as in other cases of attraction, goes on to augment, in a rapidly increasing ratio as the discs approach each other.

By the multiplication of the neuro-magnets in the linear series constituting a muscular fibre, due, though limited, extent of motion is obtained; and according to the number of linear series arranged side by side in a muscle so is the power of that muscle.

The primitive fibrils of the nerves are disposed in loops across the muscular fibres, but not coiled round the neuro-magnets as the galvanism-conducting wire is around electro-magnets when much electro-magnetic force is required. But this is not a difference in principle, merely one in degree of arrangement; and, if my views are well founded, but another example of nature's simplicity and economy in means, but excellence and completeness in results.

The nervous influence streaming along the primitive fibrils of the nerves, thus disposed in loops across the muscular fibres, communicates to the neuro-magnetic discs composing these fibres, a magnetic state in the same way that the galvanism conducted by the wires of electro-magnets does to the soft iron, of which these magnets are composed.

By virtue of the magnetic state which the neuro-magnetic discs of muscular fibre thus acquire—some directly, some by induction—they attract each other: and this constitutes contraction of the muscular fibre. (Fig. A.)

The stream of nervous influence being arrested, the magnetic state of the neuro-magnetic discs of the muscular fibres is for the time suspended, and so relaxation of the muscles takes place by the discs being allowed to separate from each other as far as their intervening substance will permit. (Fig. B.)

According to the view I have now propounded of muscular contraction, the force with which it takes place must be greater towards the end than at the beginning of the action. This is quite contrary to the conclusion arrived at by Schwann from his carefully conducted experiments on muscular motion. But I believe Schwann erred in applying to *muscular fibre* what he ascertained in regard to certain *entire muscles* in which the component

* Extract from Mr. Wharton Jones's lecture introductory to his Course on Anatomy and Physiology, at the Charing Cross Hospital, delivered on Tuesday, the 3d October, 1843.

fibres are variously grouped and arranged—grouped and arranged in conformity with the duties the muscle has to perform. For the muscle having to overcome a greater resistance when it begins to act than afterwards, a greater number of fibres are so disposed as to come into play at the commencement —a smaller number at the end of its action.

The passive organs of locomotion constitute a system of levers, cords, and pulleys; the muscles being the agents for drawing the cords by which the whole is set into play.

The bones are by the joints fitted to move on each other in the manner of levers, of all the three kinds of which we find examples in the body.

* * * * * *

A peculiarity in the levers of the body which I have now demonstrated to you, is the shortness of the arm of power in comparison with the arm of resistance; whereas in common mechanics it is always an object to have the arm of power as long as possible in comparison with the arm of resistance, for by this means less expenditure of force is required to overcome the resistance. This every one knows, and is well illustrated by the vaunt of the ancient philosopher, that he could by his own individual bodily strength move the world—provided he had a lever with a sufficiently long arm of power!

The question thus naturally arises, how is it that in animal bodies in which every object is effected at the smallest possible expense, whether of materials or power, there should be found such disadvantageous leverage?

Satisfactory reasons I believe may be given for this apparent anomaly.

In the first place, extent and rapidity of motion is obtained, space economised, and symmetry preserved; which you will admit are some equivalent for a considerable expenditure of power. But putting out of view those equivalents, I would remark that a power such as muscular contraction would have been inapplicable to long leverage. In fact, had long leverage existed, a much more complicated mode of applying the power than that which is adopted would have been necessary in order to effect the same results, whereas the short leverage presented by the bones to the muscles is in strict conformity with all the phenomena of muscular action.

The attraction of the neuro-magnetic discs of which I consider muscular fibre to be composed, being, as in common magnetism, exerted with an available amount of force only at short distances, the shortening of muscular fibres in action is necessarily of comparatively limited extent. With this limited extent of contraction in the muscles then, short leverage was the only means of obtaining extent of movement of the bones. But as the very circumstance which limits the extent of contraction in the muscles, gives them great and increasing power in contracting, this more than counterbalances any loss by disadvantageous leverage.

TEST
FOR CORROSIVE SUBLIMATE

To the Editor of the Medical Gazette.

Sir,

You did me the favour to insert in your journal of the 9th of last June, a letter in which I proposed pure metallic silver, obtained by precipitation with copper, as a test for corrosive sublimate; the trial of this agent having occurred to me on the ground of its bringing into play a double affinity instead of a single one, as where protochloride of tin is employed.

It is true that both metallic copper and tin, which have a like double action, had been long ago used as reagents for this substance; but there appeared no reason why silver might not possess some advantages over them, and I hope to make it probable in the sequel that it does so.

I believe that I should have left my process to take its chance with the public, and should have instituted no further inquiries into its powers, but for some comments upon it published under the signature of Forensis, in your numbers of the 4th and 11th of August. While no want of courtesy was to be complained of in the tone of the remarks alluded to, it seemed to me nevertheless, that the writer, by pursuing the somewhat antiquated plan of condemning upon theory a method the value of which can only be ascer-

tained by experiment (and of which he does not appear in any one instance to have made a trial), had created an unfair prejudice against it, and I became anxious to show that I had not brought forward a test so worthless as he seems to consider it. I cared not if my bantling died a natural death, but could not consent that he should thus lay violent hands on it.

In the first place it may be observed that nitrate of silver being for other uses often wanted in the laboratory, pure silver, in the state required, is very readily obtainable; nor can its cost be considered an objection to its employment, when it is stated that 3 or at most 4 grains are sufficient for an experiment, and that nearly the whole of it may be easily recovered.

At the outset, Forensis demurs to my saying that I was encouraged by the blackened appearance of the mixture to believe that decomposition of the bichloride had taken place, when corrosive sublimate and silver had been triturated together in a dry state; and having quoted the chemical law, "that bodies do not act upon each other unless one at least be in solution or contain water of crystallization," he proceeds not only to establish the correctness of my inference, but furnishes also a second exception to his just enunciated principle in the case of corrosive sublimate and tin.

Dr. Christison is next cited, where he says "that the solid compounds formed by corrosive sublimate with animal principles are either soluble in hydrochloric acid, or part with all their mercury to it. But this is not the case with the compound formed with vegetable principles." (Surely this statement is too general, and requires to be much modified, now that several animal and vegetable principles, as albumen, fibrin, and casein, are believed to be identical.) "Dilute hydrochloric acid, boiled for two hours on the compound formed in tea dissolves little of it, and leaves much undissolved powder, which yields by destructive distillation a large quantity of mercury." "Hence," says Forensis, "it must be evident that Dr. Frampton's process could not suit such a complication." I shall not stop to inquire how it can be ascertained beforehand that metallic silver may not act on a compound which offers no resistance to the protochloride of tin, but will briefly detail the most striking of several experiments. One grain of corrosive sublimate was dissolved in five drachms of distilled water, and half a drachm, that is, one-tenth of this solution, was added to four ounces of a moderately strong infusion of tea, and another half drachm to other six ounces of the same infusion: the mixture was left undisturbed in the former case for 38 hours, in the latter for four days and a half, or nearly 110 hours. At the end of these respective times hydrochloric acid was added, the mixture boiled in each case, and in both dark and abundant precipitates were observed after this treatment: in each case 3 grains of silver were boiled for some minutes in the mixture, the fluid was poured off, the precipitate digested in liquor potassæ, and washed with liquor ammoniæ, and dried, and a distinct ring of mercurial globules was in each obtained by means of heat applied to the amalgam thus obtained, and introduced into a small glass tube.

In these instances tea alone was employed: in a third experiment, one-tenth of a grain of corrosive sublimate, after remaining during 70 hours in a mixture of 9 ounces of tea and $1\frac{1}{2}$ ounces of milk with sugar, was detected by a like process. In this case the fluid was boiled for nearly two hours on the silver, from a belief that the continuance of the heat was favourable to the success of the experiment, so that 9 ounces of fluid only were drawn off, and the bichloride was separated from a mixture of 42,000 times its own weight.

Dr. Christison appears satisfied with detecting $\frac{1}{10}$th of a grain in 4 ounces of a similar mixture of tea milk and sugar, *i. e.* in one of 19,200 times its own weight, by means of the protochloride of tin.

Forensis goes on to indulge his theorising propensities after the following fashion. "When bodies are dissolved in a fluid, the body, or solvend, appears to be uniformly diffused throughout the solvent; consequently the liquid reagents seem to act under circumstances of great advantage, at least as relates to delicacy, extent, and minuteness of division, and experiment proves what reason naturally infers. Nothing,

in fact, can equal protochloride of tin in solution, and the acids above named (viz., the phosphorous and hypophosphorous)." This general assertion of the superiority of liquid over solid reagents appears bold, if not rash, at a time when M. Reinsch's test for arsenic with copper is before the public, of which I see, in your number of this day (Oct. 7), Dr. Christison says that it will detect a 250,000th part of arsenic in a fluid, while others claim for it a much greater sensibility. M. Devergie, in his Médecine Légale, 1836, limits the sensibility of protochloride of tin, and of Smithson's pile, to detecting one part of corrosive sublimate in 80,000; and Orfila, in his new edition of Toxicologie Générale, claims for copper a nearly equal power; giving the preference to this test above all others. To shew the delicacy of silver as compared with these, and more especially with the protochloride of tin, I must again appeal to experiment. Distinct mercurial globules were obtained in one case by the process I have described, when I had mixed one-tenth of a grain of corrosive sublimate with 25 ounces of water supplied by the New River Company. Here, as the boiling was continued for some time, there was a loss from evaporation, so that 23 ounces only of fluid were drained off; but at the lowest estimate there was a sensibility to one part in 115,000. A ring, too, was obtained, and mercurial globules were made apparent on scraping with a pin, after another experiment, in which 1-16th of a grain of corrosive sublimate was mixed with 27 ounces of the same water, in which case 23½ ounces were drawn off, thus proving a sensibility to one in 180,000 parts; and it is probable that this is not the extreme limit of its power.

In order to detect corrosive sublimate in the liver of a man or animal poisoned by it, in which cases it probably often exists only in the blood within the vessels of the part, or to separate it when it has combined with certain substances, as albumen or gluten, it may frequently be necessary to have recourse to the previous treatment with nitro-hydrochloric acid recommended by Forensis, or to some other, such as may be found described by Orfila; but this previous treatment, when necessary at all, is needed alike for the application of all the tests, and must be similar for all, so that it forms no ground of objection to that of silver.

The advantages of this test over protochloride of tin appear to me to be these:—1st, It is, as I think I have shown, more delicate. 2dly, Its application is far more easy and less tedious. The weight of the silver causes it to sink so readily to the bottom, and to remain so quietly there, that the little fibres, and leaves, and seeds, which Dr. Christison desires to be picked out, may, for the most part, be floated off. It does not precipitate organic matters, and has only to be freed from those adhering to it; protochloride of tin precipitates organic matters, which, with the oxide of tin, have afterwards to be dissolved: this precipitation, too, is slow; one operator allowing twenty-four hours for its subsidence. (Dr. Christison filters, but this is open to objection.) The precipitate is to be washed repeatedly, and twelve hours are required for subsidence after each washing, whereas in the case of silver each subsidence is instantaneous, and the amalgam may be very easily and thoroughly dried.

As compared with copper, silver appears to have the advantage of greater delicacy, and to require less time for its application — forty-eight hours being the time allowed by Orfila for its action where the proportion of corrosive sublimate is very small: probably, also, there is less risk of failure from the presence of foreign matters with the sublimed mercury, if I may judge from one of Orfila's experiments, in which he obtained, as he states, some empyreumatic oil, carbonate of ammonia, and several mercurial globules.

There are some other random assertions made by Forensis, which it would not be worth while to notice, even if my space allowed me to do so. I will now, therefore, take my leave of him, with the expression of a friendly wish that he may hereafter attain to that more advanced stage of knowledge which has a becoming modesty as its invariable accompaniment.—I am, sir,

Your obedient servant,

ALGERNON FRAMPTON.

29, New Broad Street, Oct. 7, 1843.

REMARKS
ON
FLOODING FROM THE UTERUS.

To the Editor of the Medical Gazette.

SIR,

MAY I request the insertion of the following in the columns of the MEDICAL GAZETTE.—I am, sir,

Your obedient servant,

JOHN ROBINSON, M.R.C.S. L.A.C.

Long Buckley, Northamptonshire.

If a woman flooding after the expulsion of the placenta be placed in the recumbent position, especially if her head and shoulders be lowest, can syncope take place till it is almost fatal? If, however, she be put in the semi-recumbent posture, will she not faint away early and safely, and will not the duration of it be manageable, and may not the hæmorrhage be checked or stopped by *this?* A woman who has flooded till she resembles a fish out of water, is liable to subsequent weakness, and to puerperal disease, or even to die at the time. May not this liability be induced by protracting the period of actual fainting through the position of the female? It need not be said, that the quantity of blood lost by a patient under ordinary venesection is *cæteris paribus* as is the posture. Syncope occurs here, and blood ceases to flow forth. Is there no analogy between this and flooding? But it is said, rest is of importance. Is a woman, entirely reclining, especially if she lie on her back, quiet whilst flooding; does she not throw her arms about, raise her head, turn it about, endeavour to turn herself, and look as if she wished to be raised up?

Again, the grand object of the recumbent position is to favour the supply of blood to the brain, and to check its flow to the uterus. Three things must not be forgotten here. First, the tortuous course of the uterine arteries. Secondly, the fact that flooding to a most alarming extent does take place while the recumbent position is maintained. And thirdly, that syncope from diminished nervous energy, consequent on diminished circulation through the brain, is safe in proportion to the limit of the hæmorrhage, and the powers of the patient.

Many practitioners have a flooding person well pillowed under the shoulders till she faints, and then have her gently laid down.

Of course it would be useless, and even dangerous, to raise a woman who had flooded whilst in the recumbent position.

This is not the time to inquire how much discharge, or how great effect on the system, constitutes flooding. Neither is it necessary to enumerate the several auxiliaries in the treatment of flooding. The fact is admitted, and the inquiry is, what is the best position?

Where there is "placenta prævia," how should the person be placed?

During natural labour, does not the long axis of the child's head correspond with the long axis of its shoulders, and both to the longest axis of the pelvis of the mother? If so, must not the caput succedaneum be as the chin of the child is turned towards the right or left shoulder? Thinking the subject of position for a female, flooding, practical in itself, and perhaps of some importance in a medico-legal sense, I have troubled you with a few remarks upon it, hoping they will be noticed by the readers of the MEDICAL GAZETTE as questions, not as answers.

VIVISECTION.

To the Editor of the Medical Gazette.

SIR,

I AGREE with your correspondents Dr. Hull and Mr. Macilwain, that the practice of vivisection is absurd; often from want of careful reading and comparing opinions on the part of experimentalists. But I think that the censures of your correspondents are too unlimited, made in wilful forgetfulness of the benefits which medical science has derived from experiments on animals, and with a leaning to unprofessional prejudice.

I will venture to weigh authorities with Dr. Hull: a worse one on such a subject than Dr. Johnson could scarcely be selected. That writer was the slave of prejudice, and we know that when prejudiced he refused to hear the voice of reason; moreover, as far as we can judge from his history, he was likely to be utterly unacquainted with the merits of the question on which nevertheless he pronounces with his wonted assumption. *My authority* is the great author

of the Inductive Philosophy, who, in the words of the learned Morhof, "digito quasi ostendit vias quas agmine facto jam multi" (should Dr. Hull take the trouble to consult the Polyhistor tom. 2, c. 1, p. 124, the next sentence to that of which I quote a part may furnish a fling at experimentalists). In the new Atlantis, which is a description of a scientific and literary Utopia, occur the following sentences:—"We have also parks and enclosures of all sorts of beasts and birds, which we use not only for view or rareness, but likewise for dissections and tryals, that thereby we may take light what may be wrought on the body of man. We try also all poysons and other medicines upon them, as well of chirurgery as of physic."

The experiments of Marshall Hall, Charles Bell, Orfila, and others, furnish such convincing proofs of the value of well devised and well conducted experiments on animals, that in my insignificant opinion the unqualified condemnation of vivisection is ignorant, or ungrateful and disgusting cant.

Physiological and toxicological experiments with remedial and poisonous agents introduce a comparatively rare groundwork of calculation on which we may proceed in reasoning of the obscure and contradictory phenomena presented during the treatment of disease. Such experiments are those of Orfila on the absorption of poisons, and late investigations which tend to prove that the chemical analogies of bodies are closely imitated by analogy of action on the living system.

We have heard of him who could mourn over a dead jackass and neglect a starving mother. Let charity begin at home, although it should not stop there. I would recommend humanity-mongers to attend to some of the barbarities committed under the name of *law*—to look at a poor maniac of 85, tottering on the brink of the grave already, put to death for a dispensation of the Almighty. And if they must have brutes to sympathize with, let them reckon up the tortures inflicted by the custom of pounding animals.

I am, sir,
Your obedient servant,
R. Mortimer Glover, M.D.

Newcastle on Tyne,
Oct. 10, 1843.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

A Practical and Theoretical Treatise on the Diagnosis, Pathology, and Treatment of Diseases of the Skin: arranged according to a Natural System of Classification, and preceded by an Outline of the Anatomy and Physiology of the Skin. By Erasmus Wilson. London: Churchill. 8vo. pp. 407.

The great improvements which have taken place in medical science during the last few years are nowhere so conspicuous as in the increased knowledge which we possess of the structural anatomy and pathological changes of the component tissues of the animal body. Mr. Wilson has very happily availed himself of our improved acquaintance with these subjects in the work before us, and has established a classification of the diseases of the skin which is more scientific and perfect than any that have heretofore been proposed. It may be inferred that a classification founded on anatomical structure must necessarily be simple, but besides this we have no hesitation in declaring it to be thoroughly practical in all its bearings, and calculated to clear away much of the obscurity which has hung around these diseases for so many years. Another advantage not commonly attained of the "natural classification," as Mr. Wilson terms it, is the retention of the nomenclature which has been so long in use, so that we have not, as is too frequently the case with new arrangements of disease, to begin our schooling again, or be submitted to the annoyance of hearing our sons speaking in a language which is unknown to ourselves. Of the principles of the new classification of diseases of the skin, the author observes:

"The basis of the natural system of classification rests upon anatomy and physiology, and herein lies its strength, its simplicity, its easy application, and its truth. The dermis and its dependencies, its glands and its follicles, are the undoubted seat of all the changes which characterise cutaneous pathology. These, then, constitute my four *primary divisions*, namely:

1. Diseases of the dermis.
2. Diseases of the sudoriparous glands.
3. Diseases of the sebaceous glands.
4. Diseases of the hair and hair-follicles."

The dermis being the tissue the most complex in its nature and organisation, naturally offers the greatest number of pathological changes. These Mr. Wilson names his *secondary divisions;* they are —

Inflammation of the dermis.

Hypertrophy of the papillæ of the dermis.

Disorders of the vascular tissue of the dermis.

Disorders of the sensibility of the dermis.

Disorders of the chromatogenous functions of the dermis.

The entire bearings of Mr. Wilson's classification will, however, be better exemplified by the following tabular arrangement, which we quote from his preface.

I. DISEASES OF THE DERMIS.

Inflammation	Congestive	Specific	Rubeola.
			Scarlatina.
			Variola.
			Varicella.
			Vaccinia.
		Non-specific	Erysipelas.
			Urticaria.
			Roseola.
			Erythema.
	Effusive.	Asthenic	Pemphigus.
			Rupia.
		Sthenic	Herpes.
			Eczema.
			Sudamina.
	Suppurative		Impetigo.
			Ecthyma.
	Depositive		Strophulus.
			Lichen.
			Prurigo.
	Squamous		Lepra.
			Psoriasis.
			Pityriasis.
	From Parasitic Animalcules		Scabies.
Hypertrophy of the Papillæ			Ichthyosis.
			Tylosis.
			Clavus.
			Verrucæ.
			Cornua.
Disorders of the Vascular Tissue			Vascular Nævi.
			Purpura.
Disordered Sensibility			Hyperesthesia.
			Pruritus.
Disordered Chromatogenous Functions	Augmentation of pigment		Nigrities.
			Pigmentary Nævi.
	Diminution of pigment		Albinismus.
			Vitiligo.
	Alteration of pigment		Ephelis.
			Lentigo.
			Chloasma.
			Melasma.
	Chemical Coloration		Oxyde of Silver Stain.

II. DISEASES OF THE SUDORIPAROUS GLANDS.

Augmentation of Secretion	Sudatoria.
Diminution of Secretion.	
Alteration of Secretion	Abnormal Odour, Colour, &c.

III. DISEASES OF THE SEBACEOUS GLANDS.

Augmentation of Secretion		Stearrhœa.
Diminution of Secretion.		
Alteration of Secretion		Ichthyosis Sebacea.
Retention of Secretion	Duct open	Comedones. Sebaceous Accumulations. Small Sebaceous Tumors, (*Molluscum Contagiosum.*)
	Duct closed.	Sebaceous Miliary Tubercles. Calcareous Miliary Tubercles. Serous Cysts. Encysted Tumors.
Inflammation of Glands and adjacent Textures		Acne. Sycosis.

IV. DISEASES OF THE HAIRS AND HAIR-FOLLICLES.

Augmented Formation	Pilous Nævi.
Diminished Formation	Alopecia. Calvities.
Alteration of Colour	Canities.
Disease of the Hair-Pulps	Plica Polonica.
Disease of the Follicles	Inflammatio Folliculorum. Favus.
Abnormal Direction	Trichiasis. Felting.

Proceeding to the composition of the work, we find the first chapter dedicated to the anatomy and physiology of the skin; a proper, and, indeed, considering the late improvements in microscopic anatomy, a necessary introduction. This subject is ably and skilfully discussed by our author, and contains several points of peculiar interest; of which we can only make room for the following.

"The contractile fibrous tissue of the dermis has been demonstrated hitherto only in certain parts of the human skin, as in the nipples and scrotum, but it undoubtedly exists in the corium of every part of the body. It consists of fibres of a reddish hue, somewhat larger than those of areolar tissue, and semitransparent. These fibres are collected into fasciculi, sometimes lying parallel with each other, and forming membranous layers, at other times interlacing in every direction, and composing a firm web. They are met with in every part of the corium, but are most abundant in the coarse network of its under surface. This tissue is easily perceived in the corium of some animals, where it forms a web around the sebaceous glands and hair follicles. It probably has the same arrangement in the skin of man; in the former situation acting as a compressor of the sebaceous gland, and an important auxiliary to the current of its secretion; in the latter producing an erection of the hairs analogous to the bristling which takes place in animals. That appearance of the skin produced by cold or fear, (spasmus periphericus,) that we term *cutis anserina*, or gooseskin, is due to the presence of this contractile fibrous tissue."

The diseases coming under Mr. Wilson's definition — congestive inflammation of the dermis—are described in the second and third chapters, the former comprehending scarlatina, rubeola, variola, &c. and the latter erysipelas, urticaria, roseola, and erythema. The study of the different

groups of diseases, both there, and throughout the book, is much facilitated by a short introduction on the general pathology of the group, which precedes each chapter. In reference to scarlatina, rubeola, and variola, the author revives the old notion of the Arabian physicians, of the origin of these diseases in the same morbid contagion, and conceives the differences between them to depend on modification either of the physical or of the vital conditions of the system by which the contagion is received. The exanthematous or eruptive diseases are "characterized by fever of greater or less severity, which precedes and accompanies the exanthem; by an exanthem, or inflammatory congestion of the dermis, which makes its appearance in the form of red points, and pursues a specific course; and by their mode of termination—namely, in resolution and desquamation of the epidermis in the two first, and by exudation and incrustation in the variolous affections; while all are liable to terminate by delitescence.

"Taking this view of the exanthematous diseases, I conceive myself warranted in placing the variolous affections in a group with which all their analogies harmonize. They correspond accurately with the definition I have given above; the premonitory symptoms present a close resemblance with rubeola and scarlatina; the eruption is identical at its first appearance, and the general management required is the same. At a later period, when variola assumes the pustular form, it must be regarded, as far as pathology is concerned, in the light of an advanced stage of rubeola and scarlatina, or as a severe type of the latter diseases expending its violence on the skin, instead of retrograding on the mucous membranes."

Under the name of the variolous diseases Mr. Wilson includes variola, varicella, and vaccinia; varicella, in its various forms of pustule, vesicle, and pimple, he treats as a modification of small-pox; and vaccinia as the small-pox of cattle. Into the latter subject he enters somewhat largely, describing the phenomena of the disease in the cow and in man, and the plans that have been suggested from time to time for the extension of the protective powers of vaccine inoculation.

The squamous diseases form the subject of chapter 7; diseases which are characterised especially by "inflammation of the dermis, and by the production of abnormal epidermis in the form of thin laminæ or scales." The diseases included under this definition are lepra, psoriasis, and pityriasis, and of the analogy subsisting between them, Mr. Wilson remarks:—

"All dermatologists since the time of Willan are agreed as to the close analogy between these diseases, and the only innovation which has been suggested with regard to them is that of combining lepra and psoriasis under a single genus. If any useful purpose were to be gained by this reunion, I would cheerfully record my vote in its favour, for the similarity of lepra and psoriasis in their essential nature is so complete as to render them almost identical. On the other hand, it may be fairly advanced, that the terms are so well understood that no error can arise out of their separate existence, that time has rendered them classic sounds which could not well be dispensed with, and, moreover, that certain differences of moment are admitted between them, such as extent of surface occupied, duration, and severity.

"The type of these affections is the development of a squama or scale. According to Willan, a squama or scale is 'a lamina of morbid cuticle, hard, thickened, whitish, and opaque. Scales, when they increase into irregular layers, are denominated crusts.' Willan was desirous of rendering the language of dermatology so precise, that no misunderstanding could possibly arise with regard to the exact signification of the terms employed, but his followers have by no means trodden in his footsteps, and even himself has shewn some inconsistency. With the intention of superior precision, he limited the term crust to the layers of morbid epidermis developed in the scaly diseases. But at the present day we use it, somewhat loosely, to signify such collections on the surface of the skin as, from their extent and thickness, convey the impression of a mass greater than the acceptation usually assigned to the word scab. For instance, the thick, greenish-yellow concretion which forms in impetigo faciei, and covers the face like a mask, and which is truly a scab, we commonly call a crust, and Willan would seem to sanction the employ-

ment of the term in such a sense, by retaining the ancient appellation of this disorder—crusta lactea."

Mr. Wilson very properly separates from the squamous group the disease termed icthyosis; the grounds of this separation he thus expresses:—

"In his order 'Squamæ,' in addition to the three before-mentioned diseases, Willan admits a fourth—namely, icthyosis. In this arrangement he is decidedly in error; icthyosis bears no analogy whatever with the leprous affections. There is no inflammation of the skin in icthyosis, no production of scales of morbid epidermis, but simply an increase in the quantity of normal epidermis, dependent upon a state of hypertrophy of the papillary layer of the dermis. For this reason I have assigned to icthyosis its more appropriate position among those affections which are induced by hypertrophy of the papillæ of the skin, and am corroborated in this view by the concurrence of Rayer and Dr. Thompson."

Respecting scabies Mr. Wilson advances some new views: he is a strong advocate for the parasitic origin of this disease, and regards the detection of the acarus as necessary to establish the diagnosis in any suspected case, when obscurity exists. The seventeenth chapter is dedicated to the history of this little animal, and forms a very curious episode to the work. It appears to have been known to Aristotle, and the Greeks; to the Arabians; and also to the ancient Romans; but the most ample and best account of the creature met with among the older authors is that given by the English writer Moufet, in his celebrated posthumous work, the "Theatrum Insectorum," published in 1634, by Sir Theodore Mayerne. This chapter is concluded by Mr. Wilson's own researches into the acarus scabiei. The following chapter is also occupied by the history of a parasitic animalcule inhabiting the sebaceous follicles of the skin, the acarus folliculorum, of which some figures, drawn by Bagg, face the title-page of the work. The existence of this creature was indicated by Dr. Simon, of Berlin, in a paper published in Müller's Archiv for June 1842. Mr. Wilson was the first to observe it in this country, and after quoting Dr. Simon's paper, he has added the result of his own researches. The largest of these animals examined by Mr. Wilson measured $\frac{1}{64}$ of an inch in length; they are found in almost every person, and are quite consistent with a perfect state of health of the skin of the individual. The number usually met with in healthy persons is two, often four or five, and in one instance Mr. Wilson found as many as eight. They are situated near the mouth of the follicle, and have the head directed inwards. They are true insects, having a head, thorax, and abdomen, are provided with four pairs of legs, and they feed on the sebaceous substance in which they lie embedded.

The chapter on the diseases of sebaceous glands is copious, and contains, besides a well-digested view of the pathology of these organs, several subjects of original research, among which we note especially that alteration of the sebaceous matter to which Mr. Wilson has given the name of icthyosis sebacea, and the so-called tubercular disorder, molluscum contagiosum. In reference to the latter disease the author observes:—

"In a third group, the secretion is not confined to the excretory duct and hair-follicle, but distends also the primary ramifications of the former, so as to give rise to a small tumor, about equal in size, in its fully developed state, to a ripe currant. This resemblance is not confined solely to size, for the sebaceous substance, rising to the aperture of the follicle in the centre of the tumor, appears like the depression on the summit of the currant to which the corolla is attached, while the sebaceous ducts swell out in the circumference of the tumor, and give to it a slightly lobulated appearance. When a transverse section of this little tumor is made, it is found in reality to be divided into five or six segments, each of the segments containing a dilated branch of the excretory duct. The swelling of these segments, moreover, gives rise to a depression on the summit of the tumor, corresponding with the aperture of the duct, from which a portion of the concreted sebaceous substance can always be removed by means of a pointed instrument, and it also produces a constriction around the base of the tumor."

Some recent microscopic observations on the nature and contents of these little tumors, by Dr. Henderson

and Dr. Paterson, have raised a question relative to their pathology. Dr Paterson inclines to the belief that the cellules which they contain are peculiar organisms, capable of nucleolar propagation when transferred to an appropriate nidus in another individual, and consequently constituting a contagious disease. Mr. Wilson, who is strongly opposed to the idea of their contagious nature, thus describes the contents of these tumors.

"On examining my new stock of sebaceous matter, (August 1842,) fresh from the patient, I found it to consist of cells heaped together like a pile of eggs, and intermingled with a large quantity of epidermic scales in flakes. The mass consisted solely of these two substances, without any granular matter or oil-globules. The cells were variable in their form, some being more or less cuboid, others irregular from compression, some oblong, like the eggs of the ant, others, again, oval, but the most common form was ovoid, like that delineated in the figures of Dr. Henderson and Dr. Paterson. The cells presented equal diversity in size, varying in their long diameter from $\frac{1}{909}$ to $\frac{1}{667}$ of an English inch, and in their short diameter from $\frac{1}{1430}$ to $\frac{1}{1111}$: some of the cuboid cells measured $\frac{1}{1000}$; the general size of the oval form was $\frac{1}{660}$ long, and $\frac{1}{1000}$ broad; there were several oblong cells, measuring $\frac{1}{555}$ by $\frac{1}{1429}$; and the common dimensions of the ovoid cells were $\frac{1}{720}$ by $\frac{1}{1000}$. This size corresponds very closely with the cells of ordinary inspissated sebaceous substance, whether it be concreted or pulpy; and also with the dimensions of the epidermic scales lying scattered among the cells. The contents of the cells were also various; some were filled with granular substance, in the midst of which, at some one point, the nucleus was perceptible; others contained a homogeneous substance, separated into polygonal masses, mostly of a cuboid shape; while others, again, were more or less filled with minute oil-globules. It is difficult to say which kind of cells were most numerous. I saw nothing like the double vesicle described by Dr. Paterson, and I think it possible that the appearance which he has delineated may have been produced either in the manner I have already suggested, or by the superposition of a single cell by several connected scales of epidermis; or again by the accidental position of the cel upon the epidermic scales in such a manner as to constitute a thin margin around it."

The fifteenth chapter contains some curious observations relative to the abnormal growth and coloration of hair. Mr. Wilson does not despair of reproducing the hair when it has fallen off; the proximate causes of baldness he states to be defective development of the hair-pulps, defective circulation in the hair-pulps, and defective nutrition of the hair-pulps, and the treatment which he proposes is the following:—

"The principal indication to be fulfilled in the treatment of baldness, is to stimulate the capillary circulation of the scalp, which is evidently below the natural standard. With this view I am in the habit of recommending the washing of the head every morning with soap, drying it by friction with a rough towel, brashing it with a hard hair brush until redness is produced, and then applying some stimulating application, rubbed briskly into the scalp for five minutes. The application which I commonly advise is either the following spirit,

℞ Eau de Cologne, ℥ij.; Tincture of Cantharides, ℥ij.; Oil of Rosemary, Oil of Lavender, of each, ♏x. M.

or a pomatum containing cantharides or croton-oil; the latter requires care in its employment. I have also used iodine, in obstinate cases, with much success."

The chapter on diseases of the hair likewise contains a brief notice of the pathology of plica polonica, and the history and treatment of ringworm; the concluding chapters of the volume being devoted to the cutaneous eruptions dependent on syphilis; the preparation and therapeutic virtues of two medicines of recent introduction, antrakokali and fuligokali; and some interesting cases of sweating sickness that were observed in Paris during the past year.

In concluding our somewhat long notice of this work, we pronounce it to be the best manual of cutaneous pathology in our language; the definitions of the various diseases are precise; the view taken of them by the author tends to simplify their study and comprehension; the pathology of the diseases is well explained; and the treatment is

sound and judicious. The reader will find here none of the wild speculations and rage for specifics that distinguish the writings of the continential authors.

The Prescriber's Pharmacopœia: containing all the Medicines in the London Pharmacopœia, arranged in Classes according to their Action; with their Composition and Doses. By a Practising Physician. 2d Edition. London. 32mo. 1843.: pp. 161.

The call for a second edition of this little work at so short an interval after the appearance of the first, is a sufficient proof that its merit has been appreciated, and that the favourable opinion we passed upon it at its first appearance was not undeserved. In the present edition numerous additions have been made, and several changes adopted in the arrangement of the work, which considerably increase its utility. The principal of these are—

1. The arrangement of the different classes of medicines, as well as the individual articles in each class, in alphabetical order.

2. The separation, under a distinct head, of external remedies from those intended for internal use.

3. The addition, in the appendix, of several very useful tables relating to the temperature of baths—the proportion of the more powerful ingredients in certain pharmaceutical compounds—the proportionate doses of medicines at different ages—a classified list of the principal mineral waters, and the saturating proportions of alkalies and acids in saline draughts.

4. The reduction of nearly all the weights and measures to the same denomination, namely, grains, scruples, drachms, and ounces—the measures of pint and gallon being now rendered in ounces.

In addition to the officinal formulæ, the author has given a few which, though not contained in the Pharmacopœia, are in constant use; and perhaps a slight extension of this list in future editions might further improve the work. There are certain things of which it is by no means easy to obtain a knowledge simply because everybody is supposed to know them. For example, a student hears continually of "yellow wash," but he has not the least idea what it is composed of, and he is ashamed to ask because everybody but himself seems to know. He may turn over a dozen big books on pharmacy without being any the wiser, and when at last he does learn, in some incidental manner, that it is composed of corrosive sublimate and lime-water, he may still remain ignorant of the proportions. If he refer to the "Prescriber's Pharmacopœia," he will find the following:—

5. [*Lotio Flava.* (Aqua Phagedenica). *Comp.* Hydrarg. bichlor. gr. ij.; aquæ Calcis, ℥j.]—which gives him, at a glance, the information he requires.

It is altogether a very useful little volume.

MEDICAL GAZETTE.

Friday, October 20, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
Cicero.

UNHEALTHINESS OF LIVERPOOL.

Dr. Johnson observed that the art of counting was in its infancy; and it must be confessed that it is still far from having attained a vigorous manhood. Conjecture takes the place of calculation; to serve the purpose of a political harangue, millions are added to the catholic population of one country, or the protestant population of another; and many a man is regaled with five thousand a year of London talk-money, who would be too happy did his income amount to half that sum in lawful British currency. The popular belief that London is as healthy as the country, a belief to be disproved by two lines of figures, is a familiar example of the neglect of the *méthode numérique.* Dr. W. H. Duncan, who has lately written a pamphlet on the high rate of mortality in Liverpool, gives another instance in point. After giving the opinion of several writers that Liverpool is remarkably healthy, he shows that, judging from the annual proportion of deaths to the population,

Liverpool is the most unhealthy town in England. Thus (omitting decimals), the annual deaths in London are 1 in 37 of the population; in Birmingham, 1 in 36; in Sheffield and Bristol, 1 in 32; in the Manchester Union, 1 in 29; but in Liverpool, 1 in 28. Again, while in London, of every 1000 deaths, 111 are at the age of 70 and upwards, in Liverpool there are only 54; and while 408 deaths out of every 1000 in London are below the age of 5, 528 occur out of the same number at Liverpool. This seems strange at first; but when the details of Liverpool life are explained, the mystery clears up: when we know the laws of nature,

"Comets are regular, and Wharton plain."

A very large portion of the inhabitants of Liverpool live in courts and cellars; and, though it is true that the same evil in kind exists in all our towns, yet it would seem that, in its extent, Liverpool goes beyond all other English cities. The courts "consist usually of two rows of houses placed opposite to each other, with an intervening space of from 9 to 15 feet, and having two to six or eight houses in each row. The court communicates with the street by a passage or archway about 3 feet wide,—in the older courts built up overhead; and the farther end being also, in many instances, closed by a high wall, or by the back or side of an adjoining building; the court forms, in fact, a *cul de sac* with a narrow opening."

It appeared, from an actual enumeration made two years ago, under the authority of the Town Council, that in the parish of Liverpool there were 1982 courts, containing 10,692 houses, and 55,534 inhabitants, being rather more than a fourth of the whole population!

As to the cellars, they "are 10 or 12 feet square; generally flagged, but frequently having only the bare earth for a floor, and sometimes less than six feet in height. There is frequently no window, so that light and air can gain access to the cellar only by the door, the top of which is often not higher than the level of the street. In such cellars, ventilation is out of the question. They are, of course, dark; and, from the defective drainage, they are also very generally damp."

Now, besides the inhabited cellars in the courts already mentioned, Liverpool contains 6,294 others, with 20,168 inhabitants.

Thus we have upwards of seventy-five thousand persons of the working classes living in wretched courts and cellars, besides crowds who are pent up in by-streets, ten, eight, or even five yards wide.

It will be naturally conjectured that the privies and ash-pits, the drainage and sewerage, are in costume with the noisome narrowness of these life-destroying abodes. And so they are. The cellar population have no place whatever to deposit their refuse matter, and the houses in the poorer streets are often in the same plight.

Thus, the Watch and Scavengers' Committee, in 26 streets of this calibre, among 1200 houses, found 804 without yard, privy, or ash-pits. The courts, too, though commonly possessing some conveniences of the kind, are in a filthy condition from their inadequacy. The ash-pits become full to overflowing, long before the nightmen empty them; and what ought to have found its way into these receptacles is deposited in the corners of the court, or in the adjoining street.

The fluid contents of these overcharged ash-pits sometimes ooze into the neighbouring cellars, where wells are dug to receive them, to prevent the inhabitants from being inundated. A well of this kind, four feet deep, and

gorged with the fetid fluid, was found in a cellar under the bed where the family slept. In another instance a cowkeeper used a cellar of this sort, filled with the poisonous liquid, to keep his milk in.

The drains and sewers are of a piece with these pestilential defects, and are, in part, their cause; for if these courts communicated with drains, the overflowings of the privies or ash-pits would find a proper vent. Within the last twelve years, indeed, more than £100,000 have been expended, under a local Act of Parliament, in the formation of sewers; but these have been built principally in the main streets, so that few members of the working classes have yet participated in the benefit of the Act.

The next element of mortality at Liverpool is the excessive crowding of the population. Take the most crowded district of London itself, and still you will find that Liverpool has attained the bad eminence of a yet more fatal accumulation of human beings. Mr. Farr thought that the maximum of crowding was attained in the East and West London Unions, where there are nearly 243,000 inhabitants to a square mile; but there is a district in Liverpool with nearly 12,000 inhabitants on a surface of 105,000 square yards, or at the rate of 460,000 inhabitants to the square mile.

It is obvious, however, that Mr. Farr may be in the right, as far as a *large* district goes; and it is very possible that in the Unions which he mentions there are portions as thronged as this populous region in Liverpool.

The straw-bespread lodging-cellars of Liverpool, which offer their penny accommodation to any and every one, may vie with the black hole of Calcutta. Thirty human beings are sometimes packed at night into a cellar containing 2,100 cubic feet, which will correspond with a room twenty feet by fifteen, and seven feet high. Each of the thirty sufferers will thus have only 70 cubic feet, or less than one-fourth of the space necessary for free respiration. Indeed, according to Dr. Duncan, the Inspectors of Prisons in England recommend not less than 1000 cubic feet for each prisoner; and if this be meant of sleeping cells, as we suppose it is, each voluntary prisoner in the subterranean vaults of Liverpool has less than a fourteenth part of the room and air considered necessary in her Majesty's jails.

In consequence of these wretched habits, fever is far more prevalent in Liverpool than in the other great towns of England; so that while the deaths from fever in Birmingham and London are less than 5 per cent. of the total deaths, in Liverpool they are more than $6\frac{3}{4}$.

In the over-peopled district mentioned above, fever has its favourite abode; five hundred cases having been annually attended by the dispensary officers out of a population of less than 11,000. In Lace Street—the worst of the set—one inhabitant out of ten was yearly attacked by fever, on the average of five years.

The districts of Liverpool where fever is most prevalent are those where the Irish most abound.

Deaths from consumption, also, are most frequent at Liverpool; and deaths from convulsions and teething bear more than twice the ratio to the population in Liverpool that they do in London.

To other causes of mortality in Liverpool may be added the inefficiency of the scavenging and cleansing in the poorer streets; Dr. Duncan comparing the visits of the scavengers in these neighbourhoods to "angels' visits," *i. e.*, "few and far between." The courts are not visited by them at all.

The crowded state of the dame and common day schools must likewise contribute its share to the mortality of children. Eight years ago, Mr. Riddall Wood found a school in a garret up three pair of dark, broken stairs, with forty children in the compass of ten feet by nine; and where "on a perch forming a triangle with the corner of the room sat a cock and two hens; under a stump-bed immediately beneath was a dog-kennel, in the occupation of three black terriers, whose barking, added to the noise of the children, and the cackling of the fowls on the approach of a stranger, was almost deafening. There was only one small window, at which sat the master, obstructing three-fourths of the light it was capable of admitting."

Dr. Duncan rejects various explanations which have been offered of the excessive mortality of Liverpool; as, for instance, that the Irish come from the county sick, and die there on their way home. For, though he allows that much of the excess in mortality is due to the resident Irish, he is confident that the Irish who leave Liverpool in bad health are far more numerous than those who arrive in that state. Yet this is not a conclusive proof; for these wanderers might take away more sick than they brought, and yet leave a host of dead behind. Nor, according to Dr. Duncan, can the high rate of infantile mortality be attributed to the refusal of the Irish to vaccinate their children, the relative proportion of deaths from small-pox being smaller in Liverpool than in Manchester.

Better times, however, are coming.

An Act for the promotion of the health of the inhabitants of Liverpool was passed last year, and came into operation on the 1st of November, 1842. We may possibly discuss its provisions on some future occasion. At present, we will only observe that a hygienic code is imperatively wanted for all our great towns. The indigent are not strong enough to resist builders and landlords; nor have they even the firmness to do what is in their own power for health and safety:

Crede mihi, miseros prudentia sæpe reliquit,
Et sensus cum re, consiliumque fugit.

PHYSICIAN PRACTISING AS AN APOTHECARY.

WITHOUT considering the question, whether it would be better or not for physicians to get their livelihood by the sale of drugs, it cannot be denied for a moment that if a person accept honours under certain conditions, and, having obtained them, he break through those conditions, he does not do that which society in general consider *right;* and he (if he have any feeling,) can never be free from the consciousness that he is acting wrong. We shall see what the College will do in this case.

London, Oct. 10, 1843.

[ADVERTISEMENT.]

To the Editor of the "County Press."

SIR,

I WISH to state, through the medium of your journal, that my having obtained the degree of Doctor of Medicine will *not* cause me to discontinue *any* branch of my profession, or to make the slightest alteration *in the terms* of attendance from those heretofore adopted by my predecessors, the Messrs. Colbeck, and subsequently by myself.

I am, Sir, Yours, &c.

FRED. GEO. REED,
Member of the Royal Colleges of Physicians and Surgeons, London.

Fore Street, Hertford, Oct. 6, 1843.

[We trust there is some mistake about this, and if so, we shall be happy to correct it.—ED. GAZ.]

COLLEGE OF SURGEONS—NEW CHARTER.

A NEW CHARTER has been granted to the College of Surgeons, a copy of which we subjoin:—

Charter.

Victoria, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, to all

to whom these presents shall come greeting, Whereas the Body Politic and Corporate of The Royal College of Surgeons in London was incorporated or re-established under or by virtue of a certain Charter or Letters Patent, bearing date at Westminster, the twenty-second day of March, in the Fortieth Year of the Reign of King George the Third, or otherwise, as in such Letters Patent mentioned or referred to, and the said College is now regulated and governed by and according to the Provisions of such Charter or Letters Patent, and a certain other or Supplemental Charter, granted by Letters Patent, bearing date at Westminster, the thirteenth day of February, in the Third Year of the Reign of King George the Fourth, and also by or according to certain Bye-Law and Ordinances made by the said College for its regulation and better government.

And whereas the Body Politic and Corporate of the said College at present consists of Persons created Members of the said College by the said first-mentioned Charter, or constituted such Members by Letters Testimonial, under the Common Seal of the said College, of the respective qualifications of such persons to practise the art and science of Surgery. And the Governing body of the said College consists of a Council of twenty-one of the Members of the College, ten of them being also Examiners of Surgeons for the College, and one of such ten persons being also the President and two of them the Vice-Presidents of the College and the two principal Serjeant-Surgeons to us and to our Heirs and Successors and the Surgeon-General to the Forces, of us, our Heirs and Successors, provided they shall have been chosen Members of the Council, have at present a preference of being admitted Examiners of the said College before all other persons whenever vacancies happen in the Court of Examiners of the College.

And whereas, in order more effectually to promote and encourage the study and practice of the said art and Science of Surgery, It appears to us expedient, that a new class of Members of the said College, to be called Fellows, should be created, and (with the exception of the first Fellows hereinafter named and directed and authorized respectively to be appointed) be required, in order to obtain the Diploma of their Fellowship, to have attained a greater age than is at present necessary in the case of ordinary Members of the said College, and to have complied with such Rules and Regulations, and passed such Examination as hereinafter mentioned; That the number of the Members of the Council of the said College should be increased, and that all future Members of the Council be chosen from the Fellows of the College and hold their office for a limited period only, instead of for life, and that the right of electing Members of the Council be transferred from the Council (with whom such right now resides) to the Body of such Fellows; That alterations be also made as regards the election and admission and continuance in office of the future Examiners of the College, and that certain further powers and privileges should also be granted to the said College. Now know ye, That We, of our especial grace and mere motion, at the Humble Petition of the said Royal College have willed, ordained, constituted, and declared and granted, and by these presents for us, our Heirs and Successors, do will, ordain, constitute and declare, and unto the said Royal College of Surgeons in London do grant, in manner following, to wit:

1. That from henceforth the Corporate Name or Style of the said College shall be—The Royal College of Surgeons of England, and that a portion of the Members of the said College shall be Fellows thereof by the name or style of The Fellows of the Royal College of Surgeons of England.

2. That the present President and two Vice-Presidents, and all other the present Members of the Council of the said College, and also such several other persons, not being less than two hundred and fifty nor more than three hundred in number, and being Members of the said College, as the Council of the said College, at any time or times before the expiration of three calendar months from the date hereof, shall elect and declare to be Fellows in manner hereinafter directed, together with any such other persons as the Council of the said College, after the expiration of the said three calendar months, and within one year from the date hereof, shall think fit and shall appoint in manner hereinafter authorized, shall be fellows of the said Colelge.

3. That the Council of the said College, with all convenient speed after the date of these our Letters Patent, and before the expiration of three calendar months from the date hereof, and in such manner as the said Council shall deem best, shall elect to be Fellows of the said College, any such number of persons, being Members of the said College, and not being in the whole less than two hundred and fifty nor more than three hundred, as the said Council shall think proper: And also shall, before the expiration of such three calendar months, by one general Diploma, under the Seal of the said College, and in such form as the Council shall think fit, declare, or cause such persons to be declared Fellows of the Royal College of Surgeons of England accordingly; but the names of all such persons, so declared Fellows, shall be contained and set forth in a Schedule to such

general Diploma. And such general Diploma shall also, within two calendar months after the Seal of the said College shall have been affixed thereto, be enrolled in our High Court of Chancery.

4. That it shall also be lawful for the Council of the said College, at any time or times after the expiration of the said three calendar months and before the expiration of one year from the date hereof, by Diploma or Diplomas under the Seal of the said College, and in such form as the said Council shall think fit, and without any Fee, to appoint any other person or persons (being a Member or Members of the said College) to be a Fellow or Fellows of the said Royal College of Surgeons of England.

5. That, except as hereinbefore mentioned, no person shall become or be admitted a Fellow of the said College until after he shall have attained the age of twenty-five years, and shall also have complied with such Rules and Regulations as the council of the said College shall from time to time consider expedient, and by a Bye-Law or Bye-Laws direct, nor unless he shall have passed such special Examination by the Examiners of the said College, as the Council shall from time to time think fit, and by a Bye-Law or Bye-Laws direct, that Candidates for a Fellowship of the said College shall undergo; but every fit and proper person having attained such age, and complied with such Rules and Regulations, and passed such special Examination, shall be entitled to be admitted a Fellow of the said College.

6. That the admittance of every such new Fellow as last mentioned, shall be by Diploma under the seal of the said College, in such form as the Council of the College shall from time to time think fit and direct; and that every person so admitted a Fellow of the said College, and not being already a Member thereof, shall also, by virtue of such his admittance as a Fellow, become and be considered admitted as a Member of the said College.

7. That the Fee to be paid on the admittance of every such new Fellow as last aforesaid (over and besides the stamp-duty on his admittance or Diploma), shall be any such sum not exceeding the sum of Thirty-one Pounds Ten Shillings, as the Council of the said College shall from time to time think fit, and by a Bye-Law or Bye-Laws direct.

8. That where several Diplomas shall be granted on the same day (whether to such new Fellows as last aforesaid, or to any Fellows to be created after the said first three calendar months, and within the first year from the date hereof as aforesaid), such Diplomas shall be numbered under such Regulations as the Council may think fit, in order to show the order and priority of such Diplomas among themselves.

9. That the Council of the said College shall cause the name of every Fellow for the time being of the said College, and if thought fit by the Council, together also with the place of residence of every such Fellow, to be entered according to their several seniorities (in the manner and to be determined or ascertained respectively as hereinafter mentioned), in a Book or Register to be kept for that purpose at the Hall of the said College, or such other place for the time being as the said Council shall direct; and such Book or Register of Fellows, at such times, and subject to such reasonable and proper Regulations as the Council for the time being shall think fit and direct, shall be open to the inspection of any Member of the said College (whether Fellow or not), at the Hall of the said College, or other place appointed for the time being for the custody of the same. And the Seniority of such Fellows to be entered in such Book or Register as aforesaid, shall be and be determined or ascertained respectively as follows, that is to say, The present President shall be entered first, the two present Vice-Presidents, according to their respective seniority next after him, and then all the other present Members of the Council according to their respective seniorities; and immediately after such the present Members of the Council; the Fellows to be elected within three calendar months from the date hereof as hereinbefore directed, according to the order and priority of their names, as the same shall be contained and set forth in the Schedule to such general Diploma, whereby they shall be so declared Fellows as hereinbefore directed; and, with respect to all other Fellows, their names shall be entered according to the dates of their respective Diplomas; and when the Diplomas of any Fellows shall bear date on the same day, then as regards or between such Fellows according to the order and priority in which the diplomas shall be so numbered, as hereinbefore directed.

10. That from henceforth no Member of the said College, who shall not also be a Fellow of the same, shall be eligible as a Member of the Council of the said College; nor (but subject and without prejudice to the validity of any Election to be made as hereinafter directed) shall any Fellow be so eligible whilst practising Midwifery or Pharmacy, or who shall have practised Midwifery or Pharmacy at any time during the five years next preceding the day of Election, nor unless he shall reside and *bonâ fide* practise his profession of Surgeon within five miles by highway or road from the General Post-Office in St. Martin's-le-Grand. And if any Member of the Council shall at any time after his election practise Midwifery or Pharmacy, or shall cease to reside and *bonâ fide* practise his profession of Surgeon within five miles of the General Post-Office,

as aforesaid, he shall be liable to removal from the Council.

11. That the present Members of the Council of the said College shall be and continue Life Members thereof as heretofore, and that the number of the Members of the Council shall in the manner hereinafter mentioned be increased from tweuty-one to twenty-four, and that all future Members of the Council shall be elective, and be elected periodically, in the manner and subject to the regulations hereinafter mentioned and directed.

12. That upon the first Thursday in the Month of July in the year one thousand eight hundred and forty-four, or within one calendar month afterwards, and in the manner hereinafter mentioned, three Fellows of the said College shall be chosen to be additional Members of the Council of the said College; and that upon the first Thursday in July in every succeeding year, for ever thereafter, or within one calendar month afterwards, and in the manner hereinafter mentioned, three Fellows shall be chosen to be Members of the Council; and in every such succeeding year in which there shall be no vacancy, or less than three vacancies among the Life Members of the Council, three of the Elective Members of the Council, or such less number of such Elective Members as, with the number of vacancies in that year among the Life Members, will make up the number, three shall go out of office upon the day whereon such three Fellows shall be chosen to be Members as aforesaid, so that the number of the Council shall at no time exceed twenty-four; and in every such succeeding year in which there shall be three or more than three vacancies among the Life Members, none of the Elective Members shall go out of office in that year, and three Fellows, and three only, shall be chosen to fill up three of such vacancies among the Life Members, and the remaining vacancy or vaeancies of that year (if any) shall be considered and treated as a vacancy or vacancies among the Life Members in the following year or years, as the case may be or require. But from and after the period when the number of the Elective Members of the Council shall be completed and made up to twenty-four, three of the Members of the Council shall go out of office every year, upon the day whereon three new Members shall be elected, as aforesaid. But in all cases Fellows going out of office shall notwithstanding be eligible for nomination and immediate re-election, and continuing eligible in other respects, their names shall be announced to the Meeting accordingly in the order and manner hereinafter directed.

13. That the Elective Members of the Council, who shall from time to time go out of office in the manner hereinbefore mentioned and directed, shall be those who shall have been longest on the Council without re-election; and in the case of Fellows elected upon the Council in the same year, those shall first go out of office whose names stand lowest (among those elected of the same year) on the Book or Register of the Fellows of the College.

14. That whenever any vacancy or vacancies shall take place among the Elective Members in any other way than by their going out of office by rotation as aforesaid, such vacancy or vacancies shall be filled up by the election (upon some early and convenient day to be fixed by the Council for that purpose) of a substitute Member or Members in the room of the person or persons whose place or places shall have so become vacant; and every person, so elected to fill up any such vacancy, shall hold such office until the time when the person in whose room he shall be chosen would have been liable to go out of office, and he shall then go out of office accordingly, but shall notwithstanding be eligible for nomination and immediate re-election, and, continuing eligible in other respects, his name shall be announced to the Meeting accordingly in the order and manner hereinafter directed.

15. That the Members of the Council of the College shall hereafter be elected by the Fellows of the said College, including the Members of the Council as such; and such Fellows, whether Members of the Council or not, shall be allowed to vote in person only and not by proxy; and that any number of Fellows (not being less than fifteen present) at a Meeting convened for the purpose of electing a Member or Members of Council, shall be competent to proceed ao such Election.

16. That the Chair at every such Meeting shall be taken by the President of the said College, or in his absence by one of the Vice-Presidents, or in case also of their absence, then by the senior Member of the Council of the said College then present. And if it shall so happen that from any cause the business of the day cannot be concluded upon such the day fixed for election as aforesaid, then and in every such case an adjournment of the Meeting shall take place to the next day, at an hour to be named by the Chairman (Sundays, Christmas-days, and Good Fridays excepted, and being passed over when occasion shall require), and so from day to day (except as aforesaid) until the business of the Meeting shall be completed; but no other business shall be discussed or attended to at any such meeting besides the election of a Member or Members of the Council, for which the same shall have been convened. Provided also, that if upon the day fixed for any such Election there shall not be fifteen or more Fellows assembled and continuing together for the pur-

pose of such Election, then at any time after the space of one hour after the time of day fixed for such Election the Chair may be taken as aforesaid, and it shall be lawful for the Chairman to adjourn the Meeting to the next day, and so from day to day (except as aforesaid) if necessary, in the manner hereinbefore mentioned with respect to adjournments of such Meetings in case of the business thereof not being concluded as aforesaid.

17. That such previous notice or notices of every election of a Member or Members of the Council shall be given as the Council shall from time to time think fit, and shall by a Bye-Law or Bye-Laws determine and appoint, and that, subject only to the regulations and restrictions in these our Letters Patent mentioned or contained, the election of Members of the Council shall be conducted in such way and manner as the Council shall from time to time think fit, and shall by a Bye-Law or Bye-Laws also determine or regulate and appoint, but such Election shall always be by Ballot, and be decided by a majority of balls or votes, and every Fellow who shall be eligible to be elected according to the regulations and restrictions contained or mentioned and authorized in or by these our Letters Patent, shall be announced to the Meeting as a Fellow eligible in the order and according to the priority in which his name shall stand in the book or registry of Fellows; and if he shall be thereupon nominated in such mode as the Council shall by Bye-Law or Bye-Laws provide for the general nomination of Members at Elections, he shall be balloted for accordingly, but not otherwise.

18. That when any eligible Fellow shall have been passed by for want of any such nomination as aforesaid, or having been balloted for shall not be elected a Member of the Council, he shall cease to be eligible to be elected, except upon such special terms of nomination as shall by the Council by Bye-Law be for the time being provided for such cases, and upon such special terms any Fellow so passed by or not elected, may be re-nominated for and be elected a Member of the Council, but if he shall be on such second occasion either passed by or not elected, he shall for ever thereafter cease to be eligible for election upon the Council.

19. That no Fellow whatever shall be eligible to be a Member of the Council unless at the time of his nomination for election as such there shall also be produced and delivered in, in such way and manner and in such form as the Council shall from time to time think fit and by Bye-Law regulate and appoint accordingly, a Certificate in writing signed by such number of Fellows as by such Bye-Law shall be required, that, or to the effect that such Fellow so nominated is a fit and proper person to be a Member of the Council, and particularly that he does not practise, and has not within five years practised Midwifery or Pharmacy, and that he resides and *bonâ fide* practises his profession of a Surgeon within five miles by highway or road from the General Post Office in Saint Martin's-le-Grand, and such nomination and certificate being delivered in the manner required, the same (as regards the matters or particulars so to be certified as aforesaid, but no further) shall be final and conclusive as to the right of such Fellow to be balloted for as a Member of the Council, and also to be elected such Member if upon the Ballot he shall be so elected.

20. That there shall be Ten Examiners of Surgeons for the said College, and the present Examiners shall be and continue such Examiners for life as heretofore. But that the two principal Serjeant-Surgeons to Us and to our Heirs and Successors, and the Surgeon-General to the Forces of Us, our Heirs and Successors, or any of them, and although they may be chosen Members of the Council of the said College, shall no longer have any preference of being admitted Examiners of the said College before other persons; and that all future Examiners of the said College shall be elected by the Council of the College, either from the Members of the Council or from the other Fellows of the said College, or from both or either of them; and that all future Examiners of the said College shall hold their office of Examiners during the pleasure of the Council, and so long only as the Council of the College shall think fit.

21. That the President and Vice-Presidents of the said College shall no longer be chosen exclusively from or out of the Examiners of the said College, but from or out of all the Members of the Council indifferently, and whether Examiners of the College or not. And that any number of Examiners of the College, not being less than Six, shall be sufficient to form a Court of Examiners, and with or without the President or Vice-Presidents of the College, or any of them (and whether or not the President or Vice-Presidents, or any of them, may be Examiners).

22. That if it shall at any time hereafter appear that any present or future Member, or any Fellow of the said College, to be appointed or admitted at any time after the expiration of the said first three calendar months from the date hereof, shall have obtained his Letters Testimonial or his Diploma respectively by any fraud, false statement, or imposition, or that either before or after obtaining such his Letters Testimonial or Diploma, he shall have violated any Bye-law, Rule, or Regulation of the said College, then and in every such case, and after such previous notice to, and such hearing of, such Member or Fellow as, under the circumstances, the Council of the said

College shall think proper, it shall be lawful for such Council to recal and to declare the Letters Testimonial or Diploma respectively of such Member or Fellow to be void, and thereupon every such Member or Fellow shall cease to be a Member, or a Member and Fellow of the said College, as the case may be accordingly.

And We do further declare our Will and Pleasure to be, That except in the respects hereby altered, the said College and the Council of the same shall continue to have all such and the same jurisdiction, powers, authorities and discretions for and with respect to the government of the said College and the election and choice of the Officers of the same, as well as the admission and expulsion of Members and Fellows, and for the making, ordaining, confirming, annulling, or revoking Bye-Laws, Ordinances, Rules and Constitutions, and transacting and ordaining all other matters and things whatsoever for the regulation, government and advantage of the said College, as such College and the Council thereof respectively now have under or by virtue of the said two several hereinbefore recited or mentioned Charters or Letters Patent, or either of them respectively, or in any other lawful manner.

And we do hereby for Us, our Heirs and Successors, grant and confirm unto them all such jurisdictions, powers, authorities and discretions accordingly; Provided always, and it is our further Will and Pleasure, that no Bye-Law or Ordinance hereafter to be made by the said Council shall be of any force until our approval thereof shall have been signified to the said College under the hand of one of our Principal Secretaries of State, or the same shall have been otherwise approved in such manner as shall be directed by Us, with the advice and consent of the Lords Spiritual and Temporal and Commons of our Realm, in Parliament assembled.

And We do hereby for Us, our Heirs and Successors, further grant unto the said College, that these Our Letters Patent, or the Enrolment or Exemplification thereof, shall be in and by all things good, firm, valid, sufficient, and effectual in the Law, according to the true intent and meaning thereof, notwithstanding the not fully or not duly reciting the said several Letters Patent, or the dates thereof, or any other omission, imperfection, defect, matter, cause, or thing whatsoever, the same or any Rule or Law to the contrary thereof, in anywise notwithstanding. In witness whereof We have caused these Our Letters to be made Patent. Witness Ourself at Our Palace at Westminster, this Fourteenth day of September in the Seventh Year of Our Reign.

By Writ of Privy Seal,

EDMUNDS.

BOOKS RECEIVED FOR REVIEW.

The Spas of Germany Revisited. By A. B. Granville, M.D. F.R.S. &c.

Clinical Remarks on Certain Diseases of the Eye, and on Miscellaneous Subjects, Medical and Surgical. By John Charles Hall, M.D. &c. &c.

Posthumous Extracts from the Veterinary Records of the late John Field. Edited by his Brother, Wm. Field, Veterinary Surgeon, London.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, October 7, 1843.

Small Pox	8
Measles	39
Scarlatina	43
Hooping Cough	35
Croup	4
Thrush	17
Diarrhœa	64
Dysentery	21
Cholera	4
Influenza	1
Ague	0
Remittent Fever	0
Typhus	27
Erysipelas	6
Syphilis	0
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	165
Diseases of the Lungs and other Organs of Respiration	236
Diseases of the Heart and Blood-vessels	21
Diseases of the Stomach, Liver, and other Organs of Digestion	122
Diseases of the Kidneys, &c.	7
Childbed	7
Paramenia	1
Ovarian Dropsy	1
Disease of Uterus, &c.	7
Arthritis	1
Rheumatism	2
Diseases of Joints, &c.	2
Carbuncle	0
Phlegmon	0
Ulcer	1
Fistula	1
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	115
Old Age or Natural Decay	73
Deaths by Violence, Privation, or Intemperance	23
Causes not specified	2
Deaths from all Causes	1056

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, October 13, 1843.

H. G. Noyes.—T. Percival.—J. B. Moxon.—J. Gatis.—E. J. Newcomb.—W. H. Parsey.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, October 12, 1843.

A. B. Andrews, Brabourne, Ashford, Kent.—E. Tegart, London.—J. Spencer, Liverpool.—E. T. D. Harrison, Welch Pool.—R. H. Boodle, Chilcompton, Somerst.—M. Burnup, Newcastle-upon-Tyne.

WILSON & OGILVY, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, OCTOBER 27, 1843.

AN

INTRODUCTORY DISCOURSE

ON THE

DUTIES AND CONDUCT OF MEDICAL STUDENTS AND PRACTITIONERS,

Addressed to the Students of the Medical School of St. George's Hospital, October 2, 1843,

By Sir Benjamin C. Brodie, Bart. F.R.S. &c. &c.

Gentlemen,—A large proportion of those whom I now address are assembled, for the first time, for the purpose of pursuing their studies in the Medical School of this Hospital; and their feelings on this occasion are not unknown to me; for, to a great extent at least, they must be such as I myself experienced, when long ago I was situated as they are at the present moment. Transplanted, perhaps, from some small community into this great city; the largest, the most populous, the richest that ever flourished; jostled in crowded streets; surrounded by palaces; where the high-born and the wealthy; where the most eminent statesmen; the most distinguished in literature, in sciences, and arts, and in every other human pursuit, are, as it were, fused into one mass to make the London world: contemplating the novel scene around you, but being not yet identified with it; it cannot be otherwise than that a sense of loneliness should come upon you in the intervals of excitement; that you should say, "What am I in the midst of so much bustle, activity, and splendour? who will be at the pains to watch the course of a medical student? who will know whether I am diligent or idle, or bear testimony in after-years to the correctness or irregularity of my conduct during this brief period of my life?"

But let not your inexperience lead you into so great an error. Even now, when you believe that no one heeds you, many eyes are upon you. Whether you are diligent in your studies; striving to the utmost to obtain a knowledge of your profession; honourable in your dealings with others; conducting yourselves as gentlemen; or whether you are idle and inattentive; offensive in your manners; coarse and careless in your general demeanour; wasting the precious hours, which should be devoted to study, in frivolous and discreditable pursuits; all these things are noted to your ultimate advantage or disadvantage; and in future days, you will find that it is not on accidental circumstances, but on the character which you have made as students, that your success as practitioners, and as men engaged in the business of the world, will mainly depend. By the time that you are sufficiently advanced for your lot in life to be finally determined, the course of events will have wrought mighty changes among us. Of those who are now the most conspicuous in station, and the most influential in society, many will have altogether vanished from the scene of their former labours; and others will be to be found only in the retirement of old age. Younger and more active spirits, your own cotemporaries, and those a little older than yourselves, will have occupied their places; and the tribunal, by which you will be judged of hereafter, will be composed of a different order of individuals from those to whose favourable opinion you would at this moment be most anxious to appeal.

But I should be sorry if I were misunderstood as representing this to be the only, or the principal motive, which should lead you to avail yourselves to the utmost of your present opportunities. The knowledge which you will obtain as students, is to be the foundation of the whole of that, which many years of professional practice will afford you afterwards; and, if the foundation be insecure, the superstructure will be of little

value. However imperfect may be the sciences belonging to the healing art, to bring them even to their present state has been the work of centuries. The industrious student may enter on the active pursuit of his profession with a scanty store of knowledge compared with that of which he will find himself possessed twenty years afterwards: but he is in the direct road to greater knowledge. He has the advantages of principles which have been established by the labours of many preceding generations; and this will render the subsequent efforts of his life comparatively easy. But he who has neglected his education must, as it were, begin anew; and he will find, when it is too late, that no combination of energy and talent will enable him to rise to the level of those who were, in the beginning, his more diligent competitors. He will, moreover, labour under another and still greater disadvantage. One business of education is to impart knowledge; but another, and still more important one, is to train the intellectual faculties. To acquire the habit of fixing your attention on the object before you; of observing for yourselves; of thinking and reasoning accurately; of distinguishing at once that which is important from that which is trivial; all this must be accomplished in the early part of life, or it will not be accomplished at all: and the same remark is not less applicable to qualities of another order. Integrity and generosity of character; the disposition to sympathise with others; the power of commanding your own temper; of resisting your selfish instincts; and that self-respect, so important in every profession, but especially so in our own profession, which would prevent you from doing in secret what you would not do before all the world; these things are rarely acquired, except by those who have been careful to scrutinise and regulate their own conduct in the very outset of their career.

It cannot be too often brought before you, nor too earnestly impressed upon your minds, that being, in the present stage of your journey through life, in a great degree released from responsibility to others, your responsibility to yourselves is much increased. Your future fortunes are placed in your own hands; you may make them, or mar them, as you please. Those among you, who now labour hard in the acquirement of knowledge, will find that they have laid in a store which will be serviceable to them ever afterwards. They will have the satisfaction of knowing that, in practising their art for their own advantage, they are, at the same time, making themselves useful to their fellow-creatures: when they obtain credit, they will feel that it is not undeserved; and a just self-confidence will support them even in their failures. But for those who take an opposite course, there is prepared a long series of mortifications and disappointments. Younger men will be placed over their heads. Even where their judgment is correct, they will themselves suspect it to be wrong. With them, life will be a succession of tricks and expedients; and if, by any accident, they should find themselves elevated into situations for which they have not been qualified by previous study, they will find that this is to them no good fortune; the world will always compare them with better persons, and the constant anxiety to satisfy others, and to keep themselves from falling, will destroy the comfort of their existence. Whether it be in our profession or any other, I know of no individuals much more to be pitied than those whom fortuitous circumstances have lifted into places, the duties of which they are not well qualified to perform.

I trust that none among you will suspect that these observations are founded on any theoretical view of the subject, or that it is merely as a matter of course that I thus address myself to younger men. I wish to see those who are educated in this hospital, an institution to which I am indebted for so many advantages which I have possessed in life, go forth into the world useful and respectable members of an honourable and independent profession. I wish to see them obtain success, and worthy of the success which they obtain: and having now had a long experience in the history of medical students, and having been careful to watch their progress through life, I am satisfied that the only method by which this can be accomplished, is that which I have pointed out: and, I may add, that I have never known an individual, who thus applied himself seriously and in earnest to his task, whose exertions were not rewarded by a reasonable quantity of professional success —such as would be sufficient to satisfy any but an inordinate ambition. Beyond this, your lot in life may indeed be influenced by circumstances not altogether under your control. Accident may place one individual in a situation more favourable, and another in a situation less favourable to his advancement. One may have the advantage of greater physical powers, enabling him to undergo the same exertion with less fatigue, and to preserve his energies unimpaired, where those of another would be exhausted; and, in like manner, one may have the advantage of powers of intellect which are denied to his competitors.

With respect, however, to the last-mentioned subject, I have no doubt that the difference is not so great as you, or the world generally, may suppose it to be. There are few persons who have not some talent, which, if properly cultivated, may be

turned to good account, and he who is deficient in one kind of talent may excel in another. But the greatest talents may be wasted. They may be blighted by indolence; they may be used for base or improper purposes; or, they may be directed to too great a variety of objects. It is well indeed for you to have some diversity of study, so as to keep all your mental faculties in wholesome exercise; so that you may not be without some sympathies with those around you, and that you may avoid the evils of narrowmindedness and prejudice: still, whoever would be really useful in the world, and be distinguished in it, must act to a great extent on the principle of concentration, keeping one object especially in view, and making his other pursuits subservient to it. And let no one sit down in despair and say, "I have not the abilities of my neighbours, and it is needless for me to exert myself in competition with them." If you would know what your own powers are, you must try to use them. Industry is necessary to their development; and the faculties of the mind, like those of the body, go on improving by cultivation. It is impossible for you to form a right estimate of yourselves in early life, nor can you be rightly estimated by others. The self-sufficient, who do not keep before their eyes an ideal standard of perfection, who compare themselves only with those who are below them, will have an advantage with inexperienced and superficial observers; but I must say that I have never known any one to do any real good in the world, or obtain ultimately a bright reputation for himself, who did not begin life with a certain portion of humility. The greatest men are humble. Humility leads to the highest distinction, for it leads to self-improvement. It is the only foundation of a just self-confidence. Study your own characters; endeavour to learn, and to supply your own deficiencies; never assume to yourselves qualities which you do not possess; combine all this with energy and activity, and you cannot predicate of yourselves, nor can others predicate of you, at what point you may arrive at last. "Men," says M. Guizot, "are formed morally as they are formed physically. They change every day. Their existence is always undergoing some modification. The Cromwell of 1650 was not the Cromwell of 1640. It is true that there is always a large stock of individuality: the same man still holds on: but how many ideas, how many sentiments, how many inclinations have changed in him! What a number of things he has lost and acquired! Thus, at whatever moment of his life we may look at a man, he is never such as we see him when his course is finished." These eloquent and philosophical remarks, made by the present Prime Minister of France, are not more applicable to those who are engaged in politics, than they are to those who are engaged in the pursuits of private life, and to none more than to yourselves.

It is not my intention on this occasion to give you any advice as to the detail of your studies. It is best that this should be left to your respective teachers. They will tell what lectures you should attend first, what afterwards; what hours you should devote to anatomy, what to the hospital practice; where you should take notes, and where you need not do so. There are, however, some general suggestions, which I may venture to offer, without exceeding those bounds to which I wish that my observations should be restricted, and without taking on myself those duties which more properly belong to others.

The first effect usually produced on the mind of a medical student, is that of being bewildered by the number and variety of subjects to which his attention is directed. In one class-room he is instructed in chemistry; in another, in the materia medica. In one place, the structure of the human body is unravelled before him; and in another, he contemplates the interminable varieties of disease, and the methods which are adopted for their cure. He sees none of the relations by which these different investigations are combined together, so as to form one science. He has the opportunity of learning a great number of facts, but for the most part they are insulated, and independent of each other; he can reduce them to no order, and the want of a proper arrangement and classification makes the recollection of them difficult and uncertain. But this is not peculiar to medical students. The same difficulty occurs to every one, who enters for the first time on an extensive field of research; and they must indeed be very indolent, and very unfit for the business of life, who suffer themselves to be disheartened by it. Have patience for a while; keep your attention fixed on the matters which are brought before you, and after every lesson that you have received, or at the close of every day, endeavour to recollect what you have seen and heard; and in the course of a short time there will be an end of the confusion; the mist which there was before you will have passed away; where every thing had been obscure there will be a clear landscape; and the studies, which, when you were first initiated in them, were dry and irksome, will become interesting and agreeable. As you acquire a more extensive knowledge of individual facts it must necessarily happen that the relations which they bear to each other will become more distinctly developed. This, however, does not seem to be the whole explanation. I cannot well understand what I have observed to happen in myself, without supposing that

there is in the human mind a principle of order which operates without the mind itself being at the time conscious of it. You have been occupied with a particular investigation; you have accumulated a large store of facts; but that is all: after an interval of time, and without any further labour, or any addition to your stock of knowledge, you find all the facts which you have learned in their proper places, although you are not sensible of having made any effort for the purpose.

In the commencement of your studies, you will, at first, be altogether occupied in the acquirement of knowledge communicated to you by others. You will learn from lectures and from books what others have learned before you, and what is there taught you must take for granted to be true. A student may be very diligent and industrious, and yet go no farther than this through the whole period of his education. He may become an accomplished person; full of information; a walking Cyclopædia; and, at the end of his labours, may obtain the reputation of having passed through his examinations with the greatest credit. All this is as it should be, and those who think that to pass a creditable examination is the only object of their studies, will be quite satisfied with the result. But is it sufficient in reality? Are no qualifications required besides those, which are wanted for your examination? It is far otherwise, and no one will rise to be conspicuous in his profession, nor even to be very useful in it, whose ambition is thus limited. The descriptions of disease, and the rules of treatment, are simplified in lectures and in books; and if not so simplified, they could not be taught at all. But you will find hereafter, that disease is infinitely varied; that no two cases exactly, and in all respects, resemble each other, and that there are no exact precedents for the application of remedies. Every case that comes before you must be the subject of special thought and consideration; and, from the very beginning of your practice, although what is taught in lectures and books may render you great assistance, you will be thrown, in no small degree, on your own resources. There is no profession in which it is more essential that those engaged in it should cultivate the talent of observing, thinking, and reasoning for themselves, than it is in ours. The best part of every man's knowledge is that which he has acquired for himself, and which he can only to a limited extent communicate to others. You will spend your lives in endeavouring to add to your stores of information; you will, from day to day, obtain a clearer and deeper insight into the phenomena of disease; you will die at last, and three-fourths of your knowledge will die with you; and then others will run the same course. Our sciences are, indeed, progressive; but how much more rapid would their progress be, if all the knowledge that experience gives, could be preserved. Now, these remarks are of practical importance to you all. You should begin to act upon them at an early period of your studies. Make out every thing relating to the structure of the body for yourselves. Do not altogether trust to what is told you in lectures and books, but make the knowledge your own by your own labours. Observe for yourselves the phenomena of disease, and the only way of doing this in an efficient manner is to take your own written notes of cases. I say, *your own* notes, for copying those taken by others, as far as the improvement of your own mind goes, is nearly useless; and when you have taken notes in the morning, write them out in the evening, and think of them, and compare them with one another, and converse on them with your fellow-students, and all this will render the investigation of disease a comparatively easy matter afterwards.

In these latter observations, I have anticipated some of those which I had intended to address especially to those among you who are on the point of offering themselves to the public as candidates for practice. It would be a fatal error for you to suppose that you have obtained the whole, or even any large portion of the knowledge which it is necessary for you to possess. You have not done much more than learn the way of learning. The most important part of your education remains;—that which you are to give yourselves, and to this there are no limits. Whatever number of years may have passed over your heads, however extended may be your experience, you will find that every day brings with it its own knowledge; you will still have something new to seek, some deficiencies to supply, some errors to be corrected. Whoever is sufficiently vain, or sufficiently idle, to rest contented, at any period of his life, with his present acquirements, will soon be left behind by his more diligent competitors. By the young practitioner, every case that he meets with, should be carefully studied; he should look at it on every side; and he should, on all occasions, assist his own inquiries by a reference to his notes of lectures and to books.

But it will rarely happen, that, in the beginning of a professional life, even the most diligent and the most successful person will be able to occupy the whole of his time with strictly professional pursuits; and the question must arise, "What is he to do with his leisure hours?" A most important question indeed it is; for the character, and the lot of the individual, must depend, in a very great degree, on the way in which such leisure hours are employed. If altogether devoted to what, dull, as they generally are, the world calls amusements, these do but

spoil the mind for better things; and if you trust to such desultory occupations as accident may bring, the result will be no better. You will be the victims of melancholy and *ennui;* an unreasonable despondency with respect to your future prospects will oppress your faculties, and deprive you of that spirit, and of those energies, which are absolutely necessary to your success. And these evils are easily avoided. How many branches of knowledge there are, which, if not directly, are indirectly useful in the study of pathology, medicine, and surgery! and all general knowledge, whether of literature, or of moral or physical science, tends to expand the intellect, and to qualify it better for particular pursuits. There is no excuse for a young professional man, who does not devote some portion of his time to the general cultivation of his mind. His own profession have a right to expect it of him, and he owes it to his own character. Ours is no political profession. It is one belonging altogether to private life. Your place in society depends, not on your being mixed up with parties and factions; not on circumstances external to yourselves, but on your own qualities; you make it for yourselves. You wish, I conclude, to be received in society as being on a footing with well-educated gentlemen. But, for this purpose, you must be fitted to associate with them; and this cannot be the case, if you know nothing of those matters, which are the general subject of conversation among them. The world care little about those distinctions, which, for the sake of a more convenient division of labour, we make among ourselves; and a well-conducted and well-informed man will be just as well received in society if he belongs to one grade of the profession as if he belongs to another. It is very much to the discredit of the great medical institutions in this country, that, except in some few instances, they have not given even an indirect encouragement to the obtaining a good general education, and, in one instance, the legislature have actually done their best to throw an impediment in the way. I know that many, nevertheless, have not been without this advantage; but they may improve themselves still further, and others may, in a great degree, make up for what they have lost, by a right disposal of their time in the early part of their practice.

It cannot be difficult for any one endowed with an ordinary degree of intelligence and curiosity, to fill up his vacant hours with pursuits that are no less interesting than useful. But your profession itself, from the moment that you are established as practitioners, will possess a new interest very different from that which belonged to it during the period of your pupillage. Hitherto you have been acting under the direction of others, and on their responsibility. Hereafter, you will have to act for yourselves, and on your own responsibility. Whatever credit is to be obtained, it will be your own; and, on the other hand, where blame is due, you may be sure that no one will volunteer to divide it with you. In every case that comes under your care, you will have to account to your own conscience for having done the very best that it was in your power to do for your patients' welfare: you will have to account also to others; to your own immediate circle of friends and patients; to society at large; to all those whose favourable opinion of your character and conduct is necessary to your success in life. You will find yourselves surrounded by duties, responsibilities, and anxieties, which were unknown to you as students. He who has not a full sense of the responsibilities which it involves, is unfit for our profession; and the anxieties of a professional life are but a wholesome stimulus to diligence and exertion. I say this, supposing them to be kept within reasonable bounds. You may allow your thoughts to dwell on subjects of anxiety until an entirely opposite effect is produced, and life is rendered miserable, and the mind enervated. Such a morbid sensibility is as mischievous on the one hand as a want of just sensibility is on the other. You must be careful to train the mind so that it may not fall into either of these extremes. Make every exertion to obtain knowledge, and to use it properly; and then keep it in your recollection that there are bounds to human knowledge, and to human powers; and that, in the exercise of our art, we cannot do all that is required of us; for, if we could, pain and misery would be banished from the world, man would be immortal, and the order of the universe would be disturbed. Do not begin life with expecting too much of it. No one can avoid his share of its anxieties and difficulties. You will see persons who seem to enjoy such advantages of birth and fortune, that they can have no difficulties to contend with, and some one of you may be tempted to exclaim, "How much is their lot to be preferred to mine!" A moderate experience of the world will teach you not to be deceived by these false appearances. They have not your difficulties, but they have their own; and those in whose path no real difficulties are placed, will make difficulties for themselves; or, if they fail to do so, the dulness and monotony of their lives will be more intolerable than any of those difficulties which they may make, or which you find ready made for you. Real difficulties are much to be preferred to those which are artificial or imaginary; for, of the former, the greater part may be overcome by talent and enterprise, while it is quite otherwise with the latter. Then, there is no greater happiness in life than that of surmounting difficulties; and nothing will conduce more

than this to improve your intellectual faculties, or to make you satisfied with the situation which you have attained in life, whatever it may be.

To be prepared for difficulties; to meet them in a proper spirit; to make the necessary exertion when they occur; all this is absolutely necessary to your success, whatever your profession or your pursuit in life may be. No one can be useful to others, or obtain real credit for himself, who acts on any other rule of conduct. But it is more easy to lay down the rule than to follow it, unless the mind be disciplined for the purpose from the beginning. The natural tendency of mankind is to indolence; to shrink from difficulties; to try to evade them rather than to overcome them. Never yield to this disposition on small occasions; and thus you will acquire a habit which will enable you to do what is wanted on great occasions without any violent or painful effort. It is by neglecting their conduct in the smaller concerns of life, that so large a portion of mankind become unequal to the performance of their higher and more important duties. If you would know a man's character, look at what he does in trifles, and, for the most part, you will be able to form no inaccurate notion of what he would be in greater things.

I have heard the following anecdote of a distinguished individual who afterwards rose to the highest honours of the legal profession. For several years, in the early part of his life, he had been wholly without professional employment. One term went, and another came; but that which brought briefs to others brought none to him. Still he was always at his post, and, disappointed but not discouraged, he continued to labour, laying up stores of knowledge for his future use. At last, it happened that he was employed as a junior counsel in a cause of great importance. The evening before the cause was to come on in the court in which he professed to practise, the senior counsel, or (as he is technically called) his leader, was seized with a sudden illness. No one of the same standing could be found to supply his place; and late in the evening the solicitor went, probably unwillingly enough, to the junior counsel, and represented to him under what circumstances he was placed, and that he must trust to him alone. All the hours of the night were devoted to the task. The knowledge which the poor obscure student had acquired now turned to good account. On the following day he gained such credit that his reputation was established; and from this time his elevation was rapid. Now this may perhaps be regarded as an extreme case, but something like it must happen to every one who attains a high station afterwards. There are few so indolent that they will not make an exertion for the sake of an immediate reward; but it is a poor spirit that can accomplish no more than this. The knowledge which you acquire to-day may not be wanted for the next twenty years. You may devote whole days and nights to study, and at the end of the year may not be aware that you have derived the smallest advantage from it. But you must persevere nevertheless; and you may do so in the full confidence that the reward will come at last. There is nothing in which the difference between man and man is more conspicuous than it is in this; that one is content to labour for the sake of what he may obtain at a more advanced period of his life, while another thinks that this is too long to wait, and looks only to the immediate result. At first, the former may seem not only to make no greater progress than the latter, but even to be the more stationary of the two. But wait, and you will find a mighty difference at last. You cannot judge from the first success of a professional person what his ultimate success will be; and this observation applies especially to those who contend for the greater prizes, not only in our profession, but in the majority of human pursuits.

A thorough determination to attain an object is the first step towards its attainment.

If you wish to advance yourselves in the way of life which you have chosen, you must persevere in one undeviating course, wandering neither to the right nor to the left, or making such excursions as you make into other regions of knowledge subservient to your main pursuit. What is called a life of pleasure is incompatible with a life of business; and those who have a more noble ambition, who love knowledge for its own sake, must learn to limit their ambition, and not waste their talents or their reputation by grasping at too much. Those who would excel in all things will excel in nothing. They may excite the wonder of the educated and uneducated vulgar; but those who are the best qualified to judge will detect their weakness, and smile at their superficial acquirements; and, after all their labour, they may die at last, and leave the world no better than it would have been if they had never existed.

And here I can conceive that some among you may say, "Is there anything which the medical profession can bestow, which will prove a compensation for the labour, the exertion, and the sacrifices which it entails upon us? Is it better to continue in it, or to turn aside to some other pursuit or employment? Indeed, it is well that this question should be thoroughly considered before it is too late; for, as far as I have seen of the world, nothing is more ruinous than that unsettled state of mind which

would lead you, when you are fairly embarked in one profession, to grow dissatisfied with it, and desert it for another. There are, I know, some remarkable instances in which the result was different; but it would be dangerous to quote these as precedents which you might safely follow, or to make the example of a peculiar genius, like that of Erskine, the foundation of a rule for ordinary men.

I know of no profession that is worthy of being pursued, which does not require as much exertion, as much labour, as many sacrifices, as that in which you are engaged; and I also know of none in which he who has the necessary qualifications is more sure of being rewarded for his labours. If it be your ambition to obtain political rank, or to have that sort of reputation which a political life affords, you will be disappointed; for, as I have already observed, our profession has nothing to do with politics. It belongs to private life; and the only other association which it has is that of science. There are few departments of either physical or moral science with which it is not, in a greater or less degree, connected; and there are some with which the connection is so intimate, that the study of them may be almost regarded as identical. The study of anatomy and physiology is a necessary preliminary to that of pathology; and the former cannot be understood by any one who has not some knowledge of the laws of mechanics and optics. Animal chemistry is daily becoming more essential to physiology, and is even beginning to illuminate some of the more obscure parts of the science of disease. You are to look, not to political rank, but to the rank of science. No other rank belonged to Newton or Cavendish, to Hunter or Davy; yet their names will live in distant ages; and they will be regarded as benefactors of the human race, when the greater number of their more noisy contemporaries, if remembered at all, are remembered without respect.

We are informed by his son-in-law and biographer, that, when Mr. Pott was seized with his last illness, he said, "My lamp is nearly extinguished: I hope that it has burned for the benefit of others." He addressed himself to his own family, and died on the following day; and, under such circumstances, it would be absurd to suppose that this was said merely with a view to produce an effect, or that these were any but his real and heartfelt sentiments. Undoubtedly it must be a great satisfaction at the close of life, to be able to look back on the years which are passed, and to feel that you have lived, not for yourselves alone, but that you have been useful to others. You may be assured, also, that the same feeling is a source of comfort and happiness at any period of life. There is nothing in this world so good as usefulness. It binds your fellow-creatures to you, and you to them; it tends to the improvement of your own character; and it gives you a real importance in society much beyond what any artificial station can bestow. It is a great advantage to you, that the profession in which you are about to enter, if properly pursued, is pre-eminently useful. It has no other object; and you cannot do good to yourselves without having done good to others first. Thus it engenders good feelings and habits; and I know of no order in society who, taken as a whole, are more disinterested, or more ready to perform acts of kindness to others, than the members of the medical profession.

Usefulness is the best foundation of independence. There are some ways of life in which it is common for individuals to obtain unmerited advancement by the patronage of others. But you must be your own patrons. Your knowledge, your skill, your good character, will constitute your fortunes. Your dearest friends will feel that they are not justified in entrusting the lives and comfort of themselves and their families to your care, unless they have reason to believe that it is safe and prudent for them to do so, and that they can do nothing better; and so far, you are no more under an obligation to those who consult you than a landlord is under an obligation to the tenant of his house or land. Those who are well disposed towards you cannot help you unless you first help yourselves. But let me not be mistaken. It is well to be conscious that you are to rely on yourselves alone; and that even if you were base enough to cringe and stoop for the purpose of obtaining the favour of others, you could derive no permanent advantage from it. This is the independence which I mean; and not that proud and misanthropical independence which rejects the feeling of all obligations to others. Whoever gives you his good opinion, whatever his station in life may be, is, in some measure, to be considered as conferring an obligation on you, and deserves to be regarded by you with kindness in return. Mankind are bound to each other by mutually receiving and conferring benefits. You cannot live in the world, and, at the same time, live apart from it, and say, "I will owe no thanks to others; for whatever advantages I may obtain I will be indebted to myself alone." All those who do justice to your real or supposed merits have a claim on your gratitude. As others will lean upon you, so you must be content to lean upon them. On no other terms can you form a part of the great community of mankind.

There are some employments which bring those who are engaged in them in contact more especially with the bad qualities of

mankind; their pride, their arrogance, their selfishness, their want of principle. It is not so with your profession. All varieties of character will be thrown open to your view; but, nevertheless, you will see on the whole the better sides of human nature; much indeed of its weakness, much of its failings, much of what is wrong; but more of what is good, in it. Communicating, as you will probably do, with persons of all conditions, you will be led to estimate others according to their intrinsic qualities, and not according to those circumstances which are external to themselves: you will learn, that of the various classes of which society is composed, no one is preeminently good, or preeminently bad; and that the difference is merely this, that the vices and virtues of one class are not exactly the vices and virtues of another. You will have little sympathy with those prejudices which separate different classes from each other; which cause the poor to look with suspicion on the rich, and the rich to look down upon the poor; and while you cannot fail to perceive the great advantages which education gives, you will acknowlege, that, to be well educated, is not the necessary result of having the opportunity of education; that a bad education is worse than none at all; and that what are called the uneducated classes present many examples, not only of the highest religious and moral principles, but of superior intellect, and of minds stored with valuable knowledge.

All this is good for your own minds; but it is a still greater advantage to you, that a good moral character is not less necessary to your advancement in the medical profession than skill and knowledge. Nor is it merely a strict observance of the higher rules of morality that is required. You must feel and act as gentlemen. I can find no word so expressive of what I mean as this. But let there be no misunderstanding as to who is to be regarded as a gentleman. It is not he who is fashionable in his dress, expensive in his habits, fond of fine equipages, pushing himself into the society of those who are above himself in their worldly station, that is entitled to that appellation. It is he who sympathizes with others, and is careful not to hurt their feelings even on trifling occasions; who, in little things as well as in great, observes that simple but comprehensive maxim of our Christian faith, "Do unto others, as you would they should do unto you;" who, in his intercourse with society, assumes nothing which does not belong to him, and yet respects himself; this is the kind of gentleman which a medical practitioner should wish to be. Never pretend to know what cannot be known; make no promises which it is not probable that you will be able to fulfil: you will not satisfy every one at the moment, for many require of our art that which our art cannot bestow; but you may look forward with confidence to the good opinion of the public, which time will bring as your reward, and to act otherwise is to put yourself on a level with charlatans and quacks.

To obtain such a competency as will place yourselves and your families above the reach of want, and enable you to enjoy such of the comforts and advantages of life as usually fall to the lot of persons in the same station with yourselves, is, undoubtedly, one of your first duties, and one of the principal objects to which your attention should be directed: but, nevertheless, let it never be forgotten that this forms but a part, and a small part, of professional success. If, indeed, money were the only object of life; if to enjoy the respect of others, and the approbation of your own conscience; to feel that you are doing some good in the world, and that your names will be held in esteem when you are gone out of it; if these things were to form no part of your ambition, then indeed you might possibly have your ambition gratified by pursuing a different course from that which I have pointed out. You might be unscrupulous in your promises; undertaking to heal the incurable; making much of trifling complaints for your own profit; claiming credit where none belongs to you; and you might try to advance yourself by what is often called a knowledge of mankind, or a knowledge of human nature. But how is that term misapplied! Knowledge of human nature indeed! This is the most difficult, the most interesting, the most useful science in which the mind of man can be engaged. Shakspeare knew human nature, as it were, by instinct. It has been the favourite study of the greatest men; of Bacon, of Addison, of Johnson. But of those who are commonly spoken of in the world as knowing human nature, the majority are merely cunning men, who have a keen perception of the weak points of other men's characters, and thus know how to turn the failings of those, who probably are superior to themselves in intellect, to their own account.

Generous feelings belong to youth, and I cannot suppose that there is a single individual present, who would not turn away with disgust from any advantages which were to be obtained by such means as these. Your future experience of the world, if you use it properly, will but confirm you in these sentiments; for you will discover that of those who strive to elevate themselves by unworthy artifices, it is only a very small proportion who obtain even that to which they are contented to aspire; and that the great majority are altogether disappointed, living to be the contempt of others, and especially

so of their own profession, and, for the most part, ending their days in wretchedness and poverty.

There is only one other subject to which, in concluding this address, I think it right to claim your attention. You have duties to perform among yourselves, one to another. There is no one among us who does not exercise an influence, to a greater or less extent, over those with whom he associates, while he is influenced by them in return. In whatever orbit a man moves, he carries others with him. If the vicious have their followers, those who set a bright example of honour and integrity have their followers also. In like manner, industry in one leads to industry in another, and the mind which is imbued with the love of knowledge cannot fail to communicate some portion of that holy inspiration to the minds of others. These, which are among the higher responsibilities of life, have begun with you already. The course which you individually may pursue, does not concern yourselves alone. While you are making your own characters, you will help to make the characters of others. Let this consideration be ever present to your thoughts. It will give you an increased interest in life. It will extend your sympathies with those around you; and it will afford you an additional stimulus to persevere in those honourable exertions, for which you will, at no great distance of time, be rewarded by the respect of the world, and esteem of your own profession.

POISONING WITH LABURNUM.

[The following is extracted from a paper on this subject by Dr. Christison, in the last number of the Edin. Med. and Surg. Journal.]

A few months ago, I received for consultation the following singular case, which has since been made the subject of a trial at the last Inverness Circuit.

A lad, Hugh Gordon, 18 years of age, a farm-servant in the parish of Dornoch, in Ross-shire, was on bad terms with his fellow-servant, the cook, on account of some petty grievances, real or imaginary; and bethought him of punishing her by administering some substance which should cause vomiting or purging. On conversing with his acquaintances on the subject, one of them suggested to him for the purpose the "French-broom-bark;" by which name is understood, in Ross-shire, the *Cytisus Laburnum*, the common laburnum-tree. And his informant added for his more particular instruction, that "he must mind how he cut the bark; for if he cut it off the tree from below upwards, it would make a vomit; if he should cut it downwards, it would make physic; and if he cut it across, it would kill." With these instructions, he cut the bark in the presence of a witness "for a vomit only," that is, from below upwards, and carried off a piece about one or two inches square.

The bark, in its dry state, was put into the cook's broth by Gordon, with the privity of another female servant, who witnessed the whole proceeding, and was aware of the lad's purpose; so that she became an accessary, and was charged as such by the law authorities. The two culprits partook of the same broth, but without this seasoning; and they sustained no harm. The cook, who remarked at the time "a strong peculiar taste in the broth, which it ought not to have had," soon became very ill, and in five minutes was attacked with violent vomiting. As the account of the symptoms was not taken till six months afterwards, when the cause of her illness was first discovered, the details are necessarily imperfect. It appears, however, that after the first attack of vomiting, which occurred at three in the afternoon, one day in the month of April of last year, the retching and vomiting continued incessantly throughout the whole evening, night, and subsequent day; that there was, at the same time, shivering, general pain in the belly, especially in the stomach, and such feebleness from the moment she first took ill, that she with difficulty walked to her bed; and that severe purging also occurred on the morning of the second day. It was some days before she recovered so far as to be able to resume her work. The sickness, vomiting, and purging, however, continued to recur in some degree daily; she complained of pains around the abdomen; she rapidly fell off in looks, and flesh, and strength; at Whitsuntide, about six weeks after she first took ill, she was forced to give up service: and her complaints went on without any intermission, except in degree, till November, when she was visited for the first time, by a physician, Dr. Ross, who was sent on the part of

the law authorities to investigate the particulars of the case. Dr. Ross found her labouring under symptoms of marked gastro-intestinal irritation, such as vomiting, especially after food, pains in the abdomen, increased by pressure, diarrhœa, with tenesmus and slightly sanguinolent stools, flatulent distension of the belly, and the like. She had likewise great debility, impaired appetite, hurried and laborious respiration, a rather frequent and easily excitable pulse, strong bellows sound over the roots of the large vessels at the heart, a pale countenance, bloodless lips, and a pale, glazed tongue. Dr. Ross considered her at that time in a highly dangerous state.

When consulted about this case a month afterwards, I was led, by the unusual occurrence of so protracted an illness after poisoning with a vegetable substance, which must have been in all probability discharged, to suggest the propriety of a minute examination of every organ, with a view to ascertain whether there might not be some organic disease of one or other of the great abdominal viscera, with whose chronic disorders it is well known that the alimentary canal often remarkably sympathizes. But after a careful examination, no sign of organic disease could be detected in any other organ except the alimentary canal; and Dr. Ross's diagnosis in this respect was confirmed by the woman's eventual recovery; which took place very slowly, however, and was not altogether complete at the time of the lad's trial in April last. Considering, therefore, the whole progress of the case, together with the fact that the woman enjoyed excellent, and even robust health, previous to the administration of the laburnum bark, no other view, in my opinion, could be taken of the whole circumstances than that if the bark caused the first symptoms, it also occasioned all the subsequent illness.

I am thus particular in endeavouring to trace the whole details and their reciprocal connection, because the woman's illness, in all its circumstances, is somewhat different from what might have been expected from such a poison. Let me now advert to the question, whether such effects as were here observed may be clearly referred to the agency of the substance alleged to have been administered.

That the substance given was laburnum bark, there can be no doubt. One of the culprit's companions saw him cut it; he himself confessed he administered what he was seen to cut; and a portion of the bark, with a few pods, taken from one of a row of the same species, from one or another of which the bark employed by him had been obtained, was sent to me at my request, for identification, and proved to be the undoubted produce of the *cytisus laburnum*.

Now, as to the possibility of this substance producing the effects observed in the case, it may in the first instance be remarked,—and the fact is not a little singular,—that I have not hitherto been able to find a single observation, in any toxicological author, on the effects of the bark of the laburnum, however well known they seem to be to the common people of the northern Highlands.

In the absence of direct information on the subject, it is fair to presume that the bark may cause vomiting and purging, since these effects are ascribed both to the leaves, and the young pods, and the seeds of the tree. For it is well known, that in many natural families of plants, and, among the rest, in the *leguminosæ*, to which the laburnum-tree belongs, there is a close agreement between the leaves and the bark in their action on the human body. Still, as there exist exceptions to this general law, the inference founded on it is but presumptive; and it needs scarcely to be observed, that in medico-legal toxicology, presumptions, while they may lead to evidence, cannot be admitted as evidence themselves. It became necessary, therefore, to ascertain the properties of laburnum bark, by direct experiments on the lower animals.

Dr. Ross, at my suggestion, made some experiments of the kind, of which the following were the result. A teaspoonful of the powder of dry laburnum bark was administered to a cat. Soon afterwards it was seen to writhe apparently in great pain; but in a short time it vomited violently, and thus cleared out its stomach. It looked languid and dejected for the rest of the day, and then quickly recovered. Sixty-nine grains of the same powder were then administered in porridge to a collie dog. In ten minutes it whined

and moaned, then violently vomited all its food, and soon got well. On a second occasion twenty grains were found sufficient to act upon this animal as an efficacious emetic. These experiments show that the bark of laburnum is an irritant, and one too of no mean energy. But the facility with which the dog and cat evacuate the stomach renders it impossible to ascertain in their instances the poisonous effects of the bark, in all their details, by the simple method of administration with the food. Neither does it appear to me that the method which consists in confining the poison in the alimentary canal by a ligature on the gullet, is here very applicable; because the circumstances in the case which an experimental inquiry was intended to elucidate, are such as to require the uncombined effects of the poison to be observed for a longer period than it is possible to do after the operation of tying the gullet.

In undertaking an experimental investigation on my own part, therefore, it appeared advisable to try in the first instance the effects of the bark on the rabbit; as this animal does not discharge irritating substances from its stomach by vomiting. I accordingly administered to a full-grown rabbit, by means of a catheter introduced into the stomach, an ounce of infusion of laburnum bark, containing the active matter of 62 grains of the bark; and that there might be no question as to the identity of the substance employed, the bark made use of was that sent to me from Ross-shire, as having been taken from one of the trees in the row where the culprit Gordon got his bark. The result, I must confess, astonished me. In the course of ten minutes the rabbit began to look quickly from one side to another, as if uncertain in which direction to go, then twitched back its head twice or thrice, and instantly fell on its side in violent tetanic convulsions, with alternating emprosthotonos and opisthotonos so energetic, that its body bounded with great force upon the side up and down the room. Suddenly, however, all movement ceased, respiration was at an end, the whole muscles became quite flaccid, no sign of sensation could be elicited; death in short had taken place, and that within two minutes and a half after the poison was injected into the stomach. The body was opened in two minutes more, and the heart was found gorged, but contracting with some force, and capable of contraction under stimuli. The stomach was found filled with green pulp soaked with the infusion; the muscles were contractile. No morbid appearance was visible anywhere.

This single experiment left no doubt that laburnum bark is a poison of unexpected energy; but the effects of course associate it with narcotics, not with the irritant poisons.

Dr. Ross subsequently repeated this experiment, and found that one rabbit died in half an hour, and another in three quarters of an hour, after small doses of the infusion were injected into the stomach with a catheter; and that a third rabbit also speedily died after eating greens impregnated with the infusion. In all these instances convulsions were the leading symptoms produced.

Other occupations have prevented me from following out farther this inquiry into the properties of the laburnum bark. A more complete inquiry would doubtless present results of no little interest. The facts now brought forward are in the meantime sufficient to prove that this poison is one of exceeding energy; that it is a narcotico-acrid poison; that in large doses, yet still in quantities of no great amount, it acts with violence and celerity as a narcotic; and that in small doses it is a dangerous irritant, acting with force both upon the stomach and intestines. It needs scarce be added that facts of so much importance, and which relate to a substance so common and so easily obtained by every one, ought to be more generally known than at present.

CASE OF STRANGULATED CONGENITAL HERNIA REDUCED EN MASSE.

To the Editor of the Medical Gazette.

SIR,

I SEND to you the subjoined case of strangulated congenital hernia reduced *en masse*, relieved by operation, hoping that you will favour it with insertion in one of your early numbers. I lay it before the profession with a strong impression upon my mind, that many lives have heretofore been sacrificed by the

neglect of a proper course of proceeding in such cases. It appears to me therefore important that the attention of persons in active practice should be drawn to the subject to which it refers, in a more pointed manner than has hitherto been done in this country by writers on hernia.

It was with this view that last winter I forwarded a few cases with remarks to the Medical and Chirurgical Society, which have been honoured with a place in its Transactions recently published. I wish the present case to be considered as an appendix to them, for for by so considering it, it will be unnecessary to append any comments further than to state that the means of diagnosis by local examination pointed out in my observations upon the cases read before the Society, were satisfactory in this, to the extent in which they were available under the peculiar circumstances of a congenital hernia so reduced.

The subject of the case was by profession an engraver, æt. 39 years, married; father of eight children, and generally a healthy man. About nine o'clock in the evening of the 6th of October, 1843, he called in his way home at Mr. Dawson's surgery, Islington, complaining of severe pain in the abdomen and sickness. He stated that he had suffered a similar pain on the 4th, which had disturbed his rest during the night, but that it had passed off in the morning, leaving him easy throughout the 5th, on which day there had been a motion from the bowels.

Upon the present occasion the pain had returned with increased violence, and had existed for about two hours. The pulse was not more than 70 in a minute, and there were not any febrile symptoms present. Pressure could be borne over the whole abdomen without any increase of pain. Mr. Dawson being aware of the existence of a hernia, instituted inquiries concerning it, but learnt that it was not down, and had not been down for a long time previous. An active aperient was administered, and the abdomen ordered to be fomented.

About half-past eleven Mr. Dawson was called to the patient's house, the pain of the abdomen having much increased. He learnt that since his previous interview the hernia had descended, and now formed a tumor about the size of an egg, hard, but not very painful. The reduction of this by the taxis was accomplished in three or four minutes, by the use of moderate pressure and with little pain, after which the patient expressed himself relieved. An ounce of castor oil combined with ten drops of tincture of opium was administered, and retained on the stomach without sickness.

When seen on the morning of the 7th, it was found that he had passed a restless night, and suffered much pain and tenderness over the whole abdomen, but not more at one part than another, nor more on the right side than on the left. There had not been any action of the bowels, and the sickness had returned. The countenance was much depressed. Sixteen ounces of blood were taken from the arm, followed by faintness, and calomel combined with opium was given.

At this period Mr. Dawson requested my attendance in consultation. I saw the patient about twelve o'clock. He was then suffering great pain. The countenance was anxious, the pulse was weak and depressed, the bowels had not acted from the medicines administered, and there had been a frequent rejection of the contents of the stomach by vomiting. I learnt that he had been the subject of inguinal hernia on the right side for some years, for which he had worn a truss during the last two.

On inspection of the groin I found that the right testicle had not descended from the abdomen, and that the neighbourhood of the rings was free from the external appearance of tumor, but there was on comparison found a very slight fulness on the right side more than on the left. When the hand was pressed over the internal ring, a small tumor could be obscurely felt; but not painful to the touch, the principal seat of pain being the left side and pit of the stomach.

The tumor alluded to was supposed to be formed by the undescended testicle, which supposition was subsequently found to be correct.

It was remarked that the external inguinal ring (which was large and admitted the introduction of the finger), was not occupied by any structures passing through it, such as might be presumed to pass through it provided a hernial sac remained in the part after its contents were reduced. The in-

ference was therefore drawn, that the sac had been reduced with its contents, and the suspicion arose, from the persistence of symptoms of intestinal obstruction, that those contents were in a state of strangulation, and constituted the kind of case known as reduction *en masse*. Under this impression, the patient was requested to get out of bed, to cough and strain, and use some exertion to produce a re-descent of the hernia. The appearance of a small flaccid tumor at the external ring was the result, but not painful, and easily returnable by a very slight pressure with the finger. The act of standing caused considerable pain over the whole region of the groin, from which the patient became faint, and in consequence was replaced in bed. Although the case was one the nature of which I fully suspected, I thought it not advisable to proceed to an exploration by operation instanter; but preferred waiting for a few hours the effect of some opening medicine which we further ordered to be administered. I determined, however, to have recourse to an operation at our next meeting, provided the bowels should not previously be relieved.

I was again summoned to attend before the arrival of the time appointed (six hours). The symptoms had become much increased in severity, the countenance was very anxious, and the prostration very great. Vomiting was frequent, and a most distressing hiccough annoyed the patient almost without intermission. The pain at the pit of the stomach had increased to agony, and the abdomen was tense and tympanitic. The groin was in the same state as at noon, but the whole neighbourhood was entirely free from pain, even when pressed on firmly with the hand.

An operation was proposed, and performed without delay.

The operation.—The patient's legs being brought over the side of the bed, his shoulders were supported by pillows. This position, by rendering the abdominal muscles more tense, caused the tumor previously mentioned to become more prominent, but it did not exhibit the tension and resistance common to strangulated hernial tumors. It, however, became the guide to my proceedings. An incision between three and four inches in extent being made over it, by a little dissection it was brought into view, and ascertained to contain fluid. By a puncture of the containing sac the fluid was let out, and, upon its escape, every appearance of tumor vanished. The opening being enlarged sufficiently, a finger was introduced through the sac into the inguinal canal, as far as the internal ring, in which situation a rounded body was detected, which eventually proved to be the testicle, but rather small, and which, I doubt not, formed the tumor felt on pressure over the internal ring in the first examination of the part.

On introducing the finger beyond this, a second rounded body was felt, lying deeply within the abdominal parietes, and extending as far as the finger would reach. The sac being more completely laid open, the testicle was readily brought into view; but to expose the second rounded body was a matter of some difficulty, and was eventually accomplished by forcibly pulling the divided portion of the sac, by which means the remainder of the sac was drawn out from the abdomen, together with its contents. This latter consisted of a knuckle of intestine, about four inches in length, and somewhat dark in colour. It was found to be strictured by the neck of the sac; the stricture before it was drawn out from the abdomen, being barely capable of being reached with the finger. There was considerable tendency of the sac, with its contents, to recede again within the abdomen on the remission of the force used for its withdrawal, and it became necessary to be held by an assistant, that the division of the stricture might be accomplished without the danger consequent upon an attempt to effect it while it was lying deeply within the parietes. In this I was assisted by Mr. Lyndall, who was present with Mr. Dawson. After the division of the stricture the intestine was easily returned into the general peritoneal cavity, followed by the finger for the purpose of ascertaining that it was entirely free from constriction. The return was almost immediately followed by relief to the distressing hiccough and intense pain of the pit of the stomach.

The wound was closed by two sutures, and the patient placed in bed. There were not any medicines administered.

Oct. 8th.—The patient is much better, and the pain of the abdomen has considerably abated. The pulse is tranquil, and the countenance much improved. The skin is free from febrile heat, and the bowels have been opened nine times without the aid of medicine.

Ordered a little beef-tea and a rice-pudding.

9th.—Abdomen slightly tympanitic and painful about the stomach. In other respects going on well.

Ordered ʒij. of Epsom Salts in ʒj. of Infusion of Gentian every two hours until the bowels are opened.

10th.—There have been two or three motions, and the tympanitic state and pain of the abdomen have passed away. The wound was dressed to-day, and found united through a considerable extent by adhesion.

16th.—The progress has been uniformly satisfactory. Wound nearly healed. The patient says he is quite well. On this day I took my leave.—I am, sir,

Your obedient servant,

J. Luke.

39, Broad Street Buildings,
Oct. 20, 1843.

REMARKS
ON
FATTY URINE.

By Golding Bird, A.M. M.D.
Assistant Physician to, and Lecturer on Materia Medica at, Guy's Hospital.

(For the London Medical Gazette.)

Cases of fatty urine are exceedingly unfrequent; and no very accurate account of this curious pathological condition of the renal secretion has been published since Dr. Prout drew attention to the subject.

I am indebted for the opportunity of investigating a well-marked case of this affection to the kindness of Mr. Montague Gossett, in whose practice it occurred. This case was peculiarly interesting on account of several curious anomalies it presented, as well as from its affording an opportunity of correcting the account generally given of the microscopic characters of urine containing fat.

The first specimens of the urine from the patient to which I have referred were given to me on April 14th of this year, with an inquiry as to their nature: one specimen was of sp. gr. 1·018, somewhat paler than usual, and was perfectly transparent, with the exception of a slight mucous cloud. The other specimen, stated to have been passed some hours before the former, resembled milk in colour and general appearance, and was quite free from any urinous odour: it was faintly acid, of sp. gr. 1·020: the addition of either nitric or hydrochloric acid produced a considerable curdling. By repose, a cream formed on the surface of the urine, forming a layer $\frac{1}{10}$th the thickness of the whole volume of fluid. When a drop of this milky urine was placed under the microscope, no oily globules could be seen when examined with an excellent object-glass of $\frac{1}{8}$th inch focus, by Powell; the turbidity appears to depend upon an immense number of particles, so minute that under a magnifying power of 800 diameter they resembled mere points.

I confess that I could not help suspecting that some addition had been made to the urine by the patient after its being passed; an idea that at first gained some support from the fact, that when the bladder was emptied by means of the catheter, the urine was found to be quite transparent and healthy.

On April 22d, I saw Mrs. T—— in bed; she was an extremely fat, flabby woman, about 35 years of age, the mother of several children. She expressed herself as quite well with regard to her general health, and only complained of the occasional milky state of the urine as possibly indicative of some threatening ailment. She stated to me that for several years she had been accustomed to pass milky urine, especially during part of her pregnancies. On several occasions the urine, although not milky, had gelatinised on cooling so as to assume the form of the receiving vessel like so much ordinary jelly. The appearance of the milky urine was exceedingly capricious, sometimes being constant for weeks together, and then disappearing for some time. She could trace no apparent connection between its appearance and any obvious exciting cause; it bore no evident relation to the quality, quantity, or hours of her meals, nor to the periods of menstruation. The only general rule she had observed regarding its appearance was that it most frequently appeared when she

first voided urine on rising from bed, and hence she fancied it was produced by lying on her back all night. It had become most frequent in its appearance since she had begun to grow fat.

My visit was made about 2 P.M.; Mrs. T—— had not risen except to pass water since the preceding evening. Three specimens of urine were shewn me as having been passed since an early hour in the morning.

The first specimen was like ordinary urine; contained an abundance of pinkish urate of ammonia, which disappeared by heat; it was acid, and not coagulable; contained no albumen.

The second specimen was as pale as water, subacid, and, on heating it, clouds formed in it from the coagulation of albumen.

The third specimen was of a healthy amber colour; it appeared natural, and was free from albumen.

The examination of these specimens certainly gave no satisfactory explanation of the nature of the milky urine she had previously passed, and she declared that this was the first occasion on which she had failed to pass that kind of urine for some weeks. I introduced a catheter into the bladder, and a pint of fluid escaped, possessing the odour, colour, and general appearance, of hot milk and water; in fact, having none of the physical characters of urine.

The specimen thus obtained was of sp. gr. 1010, slightly acid; by repose a cream-like layer formed on its surface, leaving the lower portion of the fluid nearly transparent. I may remark that Mrs. T—— had not partaken of any food since breakfast.

This milk-like urine presented the following chemical characters.

A. When exposed to heat, a large and tremulous coagulum of albumen formed, becoming firmer and more solid on raising the temperature to ebullition.

B. About four ounces of the urine were agitated with half an ounce of pure ether, and the mixture set aside in a carefully closed bottle. On the following day, the mixture had lost all its opacity, and presented three well-defined layers. The lowest, forming the great bulk of the urine, was transparent, and consisted of urine deprived of the ingredients which had produced its previous opacity. On the surface of this rested a perfectly transparent and tolerably firm coagulum of fibrin, about a quarter of an inch thick, of a pale yellowish colour. The superior layer consisted of an ethereal solution of fatty matter; this fluid was of a fine golden yellow colour.

C. The ethereal solution was decanted and allowed to evaporate spontaneously: a large proportion of yellow fat, closely resembling butter in colour and odour, was left. It differed from some specimens of fatter matter obtained by an analogous process from milky serum of blood, in not presenting any tendency to crystallize. This yellow fat readily fused by heat into a perfectly transparent oil, which slowly solidified by cooling, and it has undergone no change by keeping up to the present period.

D. A portion of the urine left to itself for some time underwent no further change than the formation of a thin creamy layer on its surface; not the slightest tendency to the formation of a fibrous coagulum appeared.

E. A portion of the milky fluid was evaporated at a boiling temperature to dryness, and digested with hot water. The fluid was filtered, and after concentration treated with nitric acid, when crystals of nitrate of urea slowly formed.

I carefully examined the urine under the microscope, but not the slightest appearance of oil globules, blood-discs, or pus granules, could be detected; the opacity appearing as in the first specimen given me by Mr. Gossett to depend upon the presence of particles so minute as to present no defined form; appearing like mere irregular points when examined with a linear power of 800 under an excellent achromatic microscope. The result of this examination is completly opposed to the few statements recorded by continental observers on the optical characters of fatty urine. Thus M. L'Heritier* has stated that oily globules can always be detected in fatty urine; and a similar remark is made by Franz Simon† of Berlin. The latter has, indeed, stated that he has met with three varieties of fatty urine; one in which

* Traité de Chimie Pathologique, Paris, 1842, p. 480.

† Physiologische und Pathologische Anthropochemie. Berlin, 1842. Bd. 2, S. 386. A translation of this very useful and elaborate system of pathological chemistry into our language will shortly appear from the pen of Dr. Day. A work of this kind has long been a desideratum.

the fat is merely diffused through it, and collects on its surface by repose, as in the cases recorded by Dr. Elliotson; the other in which the fat exists combined with albumen; and a third in which the fatty matter existed with casein as an emulsion, forming in fact true milky urine. In all these Simon states that fat-globules could be seen by the microscope.

So far as my own observations have extended I have never met with true milky urine, but I may remark that when milk is added to urine the oil-globules are easily seen by the microscope, even for a long period, quite unchanged.

In the urine passed by Mrs. T——, there can be no question but that the fat existed with the fibrin as an emulsion, so minutely broken up, and perhaps combined with the latter, as to lose its characteristic miscroscopic characters. The analytic power displayed by the ether was peculiarly interesting: by merely dissolving out the fat it left the albuminous matter in a position capable of concreting into a transparent fibrous clot by repose, and by rendering the urine transparent, at once demonstrated the cause of its previous opacity. The presence of the fat probably mechanically prevented the formation of a coagulum of fibrin until it was removed by the solvent power of the ether.

A case somewhat similar to the present has been recorded by Bizio*: he compared the fat to butter: it is to be regretted, however, that he did not make any microscopic examination of the urine. M. Rayer† has stated that in all the cases of fatty urine which have fallen under his notice, albumen has invariably been present. He further remarks, that chylous urine contains globules like those of blood, readily distinguishable from pus granules by microscopic examination.

To what class can the urine of Mrs. T—— be referred? In its general properties it approaches closely to what has been termed chylous urine by Dr. Prout and others, but the absence of fat-globules at present points out a characteristic difference, if the microscopic appearances of this form of urine have been correctly recorded.

I can view this case in no other light than that of one in which a great tendency to the development of adipose matter existed, and an excess of fat, not capable of being otherwise appropriated, escaped by the kidneys in the form of an emulsion with the spontaneously coagulable albumen of the blood *(fibrin)*: still the occasional occurrence of this pathological state of the secretion, alternating with healthy and even albuminous urine, is at least exceedingly remarkable, and presents anomalies which at present admit of no satisfactory solution.

Cases of this kind are so extremely rare, that it would be an important point for every practitioner who meets with a case of milk-like urine, in which the opacity does not disappear by heat or nitric acid, and in which purulent matter is not suspected to be present, to submit it to a careful microscopic investigation to ascertain in what state the fatty matter really exists in the urine, and whether it alternates with albuminous urine, independently of the presence of organic disease.

I have since my visit to this patient heard from her but once, and then she appeared in good health; still, however, passing the milk-like urine at irregular periods.

14, Myddelton Square.
Oct. 18, 1843.

ON SULPHATE OF POTASS.

To the Editor of the Medical Gazette.

Sir,

I beg to submit for the consideration of the profession, that the injurious effects of sulphate of potass may be entirely traced to irritation, caused by the spiculæ of undissolved salt. This opinion was suggested partly by the announcement of Chevallier, that on a post-mortem examination of the stomach and intestines of an individual whose death had been caused by this salt, portions of undissolved salt were found in the stomach and intestines; and at such points inflammation of the mucous membrane was especially remarked. On this suggestion I washed some of the powdered sulphate of potass of the shops, and thus removed that portion of the salt which existed in a more minute state of division. Under the

* Schweigger's Journal für Chemie, B. xi. s. 246.
† Traité des Maladies des Reins, p. 155, t. I.

microscope, the undissolved portion was found to consist of exceedingly sharp-pointed acicular fragments, really formidable in appearance: some of these, when attached to a point by wax, were capable of wounding the skin of the arm like glass.

A dose of two drachms of this coarser powder caused much more uneasiness than four drachms of the salt precipitated by spirit of wine from an aqueous solution; indeed, the effect of the latter was as rapid as sulphate of magnesia, whereas the former not only caused some considerable pain, but its effects were felt for two days after the dose had been taken.

It was mentioned by a gentleman, at the meeting of the Pharmaceutical Society held on the evening of the 11th inst., that he had remarked the solubility of sulphate of potass was increased by sesqui-carbonate of soda; that ten grains of sesqui-carbonate of soda were sufficient to render readily soluble two drachms of the sulphate of potass; and upon the same grounds as James obtained the various explanations why a fish weighed more when dead than when alive, so the society was informed this might arise from double decomposition! Every chemist will smile when he is informed that sulphate of potass might be decomposed by carbonate of soda; but every chemist may not be at the pains to test so simple an assertion as that sulphate of potass is more soluble in a solution of carbonate of soda than in distilled water: therefore I may perhaps spare some conjecturing by stating that such is not the fact, and that, except as regards the variations of temperature, which have a very slight effect indeed, sesqui-carbonate of soda, in the quantities above stated, and even when increased to thrice the above quantity, does not render the liquid capable of dissolving more potass.

To return, I beg, then, to suggest to practitioners that, when sulphate of potass is administered to patients, where the stomach is exceedingly irritable, in a dry form, that the salt be prepared in a minute state of division by precipitation; or if in solution, that a sufficient quantity of water (three ounces of water to two drachms of sulphate) be employed for its perfect solution. By this practice the salt may lose its character as a permanent laxative, but the serious effects narrated in your last will, in my humble opinion, be avoided.—I am, sir,

Your obedient servant,
G. M. Mowbray.

36, Paternoster Row,
Oct. 17th, 1843.

MATICO.

To the Editor of the Medical Gazette.

Sir,

Your publication of Oct. 6th contains a report of some cases, by Dr. H. Lane, of Lancaster, shewing the efficacy of the infusion of matico as an injection in leucorrhœa, &c.; but, in publishing these cases, it is somewhat surprising that Dr. Lane should have omitted all mention of the individual (Dr. Jeffreys, of this town) to whose zeal and perseverance, in despite of many obstacles, we are indebted for its introduction, whereas it might be inferred from Dr. Lane's communication that *he* was the first person to make trial of its internal use, as he merely alludes to the paper of Dr. Monro, of Dundee, respecting its external application.

The history of the introduction of the matico to the knowledge of British practitioners is this:—A friend of Dr. Jeffreys, on his return from South America in 1837, gave him a specimen of this plant, stating its common use as a styptic in that country, and describing the occurrence by which its efficacy was accidentally discovered.

Dr. Jeffreys published a short account of it in the Lancet of Jan. 5, 1839.

He subsequently, at considerable expense, procured a large supply, which he distributed gratuitously to a great number of medical practitioners, as well as to various hospitals and public institutions, amongst which was the Lancaster Infirmary and Dispensary, and he had some correspondence with Mr. C. Ricketts, the house-surgeon, in 1841.

Dr. Lane does not state how the matico came into his possession, but it is not improbable that it formed a part of that supplied to Mr. Ricketts by Dr. Jeffreys.

The letter of Dr. Monro to which Dr. Lane refers is expressly addressed to Dr. Jeffreys.

If your readers will consult the last vol. (Vol. XI.) of the Transactions of

the Provincial Association, they will find a paper on matico by Dr. Jeffreys, with an engraving copied from the Flora Peruviana. In this paper, several cases are recorded by different practitioners of the efficacy of the infusion *internally* in dysentery, menorrhagia, leucorrhœa, &c., so that it is rather singular that Dr. Lane should state that he was not aware that it had hitherto been employed internally.

The application of it as an injection in leucorrhœa has, I think, not been previously recorded.

The cases of Dr. Lane add confirmation to the value of matico as a remedial agent; and it was for that very object tnat Dr. Jeffreys distributed so large a quantity through various parts of the kingdom. I scarcely know whether it is worth while to address you on this subject, but I consider it due to Dr. Jeffreys that all notice of the merit, which he may fairly claim for its introduction, should not be either accidentally or intentionally omitted.

I am, sir,
Your obedient servant,
R. W. Scott, M.D.

Liverpool, Oct. 19, 1843.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le ecteur se tue à abréger."—D'Alembert.

Lectures on the Eruptive Fevers, delivered at St. Thomas's Hospital, in January 1843. By George Gregory, M.D. &c. 1843.

Dr. Gregory has been long known to the profession as a most industrious and useful labourer in the department of our art to which these lectures refer. His connection for many years with the Small-Pox Hospital has given him great opportunities, and the papers he has at various times published shew that they have not been thrown away upon him. The present differs in one respect from any of the Doctor's former productions, namely, as to the style, which is here conversational rather than didactic; a remark which we by no means intend should convey any unfavourable impression: indeed, the language appears to us remarkably unaffected and agreeable.

The characters and affinities of the eruptive fevers are first explained; the mutual relation of these diseases to each other are exhibited, and the importance of the skin as a portion of the animal frame demonstrated. The greater exanthemata are those more particularly enumerated, and the influence they have upon human life is clearly demonstrated: by this it appears that upon an average nearly 40,000 die annually of one or other of the exanthemata in England, and about 5000 in London alone, giving an average of about 11 per cent. of the total mortality from all causes: four diseases thus producing one-ninth of the total mortality of Great Britain, and probably of Europe.

The following are the circumstances which mark the general characters of the exanthemata. 1. The presence and course of the constitutional disturbance. 2. The local affection. 3. The law of universal susceptibility. 4. Their non-recurrence. 5. Their being contagious. 6. Their being epidemic. These are severally made the subject of discussion, and some interesting observations are offered on each; after which the principles which ought to guide us in the general management of this class of diseases are clearly and satisfactorily pointed out. In this part of his work the author very properly urges that the great object of our treatment in the exanthemata ought to be rather to guard against those "congestions and superadded affections" by which they are frequently accompanied, than attempting specific remedies against the original malady itself.

The first exanthem spoken of individually, is small-pox; a disease of which Dr. Gregory has, we presume, seen more than has fallen to the lot of any other practitioner of the present day; but as we have frequently had occasion to allude to his papers as they have from time to time appeared, we shall now confine ourselves to a few points of interest.

Among these, the extent to which the fluids become implicated in small-pox cannot fail to excite attention, and a very curious illustration of it is given by Dr. Gregory. The miasm, as it were, poisons the blood, altering its properties and power of coagulating in a remarkable manner. Among other instances of this the author mentions that he was last year called into con-

sultation with Dr. L. Stewart, regarding a lady in small-pox, whose whole body was of the colour of indigo, so that he took her at first for an African. She conversed with our author quite tranquilly but a few hours before her death, "proving that the nervous system is not necessarily, nor is it even usually, implicated in the petechial form of small-pox."

In the cases of adult females, Dr. Gregory states, that when thus attacked menorrhagia is almost always present, and if they be pregnant they almost invariably miscarry, the fœtus dying in utero. This is what used to be called black small-pox by the older writers.

Ophthalmia is a very common accompaniment of small-pox; but it is a mistake to suppose (as is often done) that this arises from the formation of pustules on the cornea and conjunctiva. There is no specific inflammation of the eye in small-pox, but the ophthalmia so destructive of vision is a sequela of the disease. It frequently sets in about the tenth day, and runs its course so rapidly that the eye is destroyed within forty-eight hours.

The chest also is frequently affected; but the abdomen is peculiarly exempt from inflammation in small-pox: thus we are told the idea of any thing like pustules being found on the mucous membrane of the stomach or bowels is erroneous, the appearances in reality being "in all respects" the same as are met with in typhus fever.

The whole human race, with very few exceptions, is susceptible of this disease, and the inhabitants of different regions seem to be in this respect on an equal footing. To this general rule there are several exceptions, and persons have been known to go through life without ever taking the disease, though frequently exposed to it. Again, some persons appear unsusceptible of the disease at one time, and yet take it at another. Dr. Gregory gives an example of this. A lady residing at Salisbury was inoculated for small-pox in 1804, at the age of 83, and took it. She had brought up a large family, many of whom had passed through small-pox, and been attended by her, without her becoming affected with the disease. It has been said that an exemption from the disease prevails in particular families, but Dr. Gregory states that this idea is entirely without foundation.

That small-pox may occur a second time in the same individual is a well-known fact; but our author states it to be much less frequent than is supposed. "At the Small-Pox Hospital very few present themselves who affirm that they have previously undergone small-pox; and of the few who do, but a very small portion can stand the test of a rigid scrutiny." Louis XV. of France, is said to have died of a second attack of small-pox, but Dr. Gregory (who has examined the details carefully,) is of opinion that the first attack was not really variola.

The power of medical treatment over small-pox is by no means so striking as in inflammation; nevertheless, remedies exert a certain degree of influence upon the disease, and the things to be attempted are thus enumerated.

1. To moderate the violence of febrile excitement whenever we meet with it.
2. To check and relieve local determinations of blood, at whatever period of the disease they arise.
3. To support the powers of the system when they flag, either from the malignity of the poison or the long continuance of the disorder.
4. To combat, by appropriate means, concomitant disease.

One of the most interesting questions certainly connected with the treatment of small-pox relates to blood-letting. On this point Dr. Gregory makes the following observations:—

"Some writers, in their zeal for blood-letting, have tried to persuade themselves that it is the only measure which can be relied on to lessen confluence, and to prevent the development of pustules in the mucous membrane of the throat and trachea. This opinion is altogether erroneous. Bleeding has no effect on the quantity of eruption, whether cutaneous or mucous. The most confluent eruption has succeeded to the most vigorous employment of the lancet. To bleed, therefore, merely because small-pox is anticipated, with the view, thereby, of preventing confluence, is uselessly to expend that power which will be required for the repair of injury to the surface. You will keep these general principles before you, and take care that in your efforts to diminish internal congestion you do not materially impair constitutional power.

"If the stomach during the initiatory

fever, remains very irritable, rejecting everything that is taken, even the saline effervescing draughts with laudanum, which you will naturally feel disposed to try, I recommend you to apply mustard poultices to the epigastrium and to the feet, and to promote eruption by the pediluvium.

Again: if the circulation at this period be languid, if the pulse be small and feeble, the skin pale, and the extremities cold; if the patient lies on his back, sunk and exhausted, let him have immediately warm brandy and water, cover him with bedclothes, apply mustard poultices to the centre and extremities of the circulating system, and give thirty drops of laudanum, to be repeated in four hours, if necessary. This cordial plan of treatment must often be continued for several days, when the eruptive nisus is accompanied with depression, and nature appears so obviously unequal to the effort."

In ordinary cases, the great object is to lessen the patient's suffering, without interrupting the process of pustulation; and, if there be nothing particular, a few saline draughts, and a little castor-oil, so as to keep the bowels free, are all that is required. The petechial form of the disease admits, he thinks, of no essential relief from medicine. "The loss of a little blood from the arm has appeared to me more effectual than any other measure." In all cases a warm bath is advisable before the patient again mixes in society.

Where, in the process of the secondary fever, apoplexy, peripneumony, or pleurisy comes on, blood may be taken freely; but in erysipelas, bark and wine are sometimes required. In ophthalmia (one of the most serious evils which follows small-pox), it is sometimes necessary to sacrifice the eye to save the patient's life—the state of whose system prohibits the requisite depletions.

In regard to the eruption itself, Dr. Gregory informs us that benefit is frequently derived from covering the surface with dry powder, such as starch; while fomentations and poultices are the only local means of any service in the abscesses and erythematous inflammations which sometimes attend the stage of secondary fever.

All the plans hitherto suggested for preventing pitting, have, in our author's hands, proved unavailing.

On the subject of inoculation, the opinions of our author are somewhat different from those entertained by most persons, and we shall conclde this part of our analysis by quoting his opinions in his own words.

"Since the introduction of vaccination, it has been the fashion to decry inoculation, and to impute to it mischief of which it was not guilty. The great objection made to inoculation, and that which recently induced Parliament to abolish it altogether, under heavy penalties, was, that it disseminated the virus, and multiplied the foci of contagion. Dr. Watkinson and Dr. Schwenke, in 1777, and more recently, Dr. Adams, broke the force of this argument, by pointing out how important a part epidemic influence plays in the diffusion of variola. Had they lived in our times, how strongly would they have fortified their arguments! We saw, in 1838, an epidemic small-pox raging in London, where inoculation had long been discontinued. The admissions into the Small-Pox Hospital in that year exceeded those of 1781 and of 1796. Inoculation was abolished throughout England and Wales in 1840, and the act has been most rigidly enforced; yet, during the last two years, small-pox has visited every county of England.

Sir Gilbert Blane has attempted to prove by statistics the evils of inoculation. He has shewn that the proportion which the mortality by small-pox in London bore to the general mortality, increased during the last century from 78 to 94 per thousand. But various considerations serve to weaken the force of this argument. If, for instance, we divide the last ninety years of the 18th century into three periods, we shall find that the recorded deaths by small-pox were as follow:—1711 to 1740 (when there was no inoculation), 55,383; 1741 to 1770 (when inoculation was coming into general use), 63,308; 1771 to 1800 (when inoculation was almost universal,) the deaths were only 57,268: so that, by this shewing, inoculation diminished the mortality by 8115 lives!

"Statistics are very useful, and deservedly carry great weight with them; but they may be enlisted, with a little management, on both sides of an argument.

"One subject only remains for our

consideration, and that is, the question, whether any circumstances would still warrant us in recommending inoculation on scientific principles? Concurring most cordially in opinion that the practice of inoculation by *unqualified* persons ought to have been put down) not in 1840, but forty years before that) by stringent legislative enactments, I stil remain of opinion, that under several circumstances it is the duty of a medical man to recommend inoculation. These circumstances do not, indeed, often occur; but the legislature would hardly wish to control and fetter, even in a single case, the deliberate judgment of a physician, acting for the benefit of his patient. I will name to you four of these cases:— 1. When a person has been found, from peculiarity of habit, unsusceptible of vaccination. 2. When new sources of vaccine lymph are introduced, and it becomes of importance to ascertain that the new virus is efficient. 3. When young persons (between the ages of ten and twenty), vaccinated in early life, are proceeding as cadets to India. 4. When small-pox unexpectedly breaks out in a country district, at a time when (even with the facilities of a penny post) vaccine virus is not to be obtained.

"Other cases, equally strong, might be put; but what I have said will probably suffice to show that a clause (duly guarded against abuse) permitting qualified medical practitioners to inoculate under circumstances of urgency, would have been an useful addition to the Vaccination Extension Rill. That it was not so added was no fault of mine."

Our author next proceeds to give an account of measles, scarlatina, and erysipelas. But these we pass by, in order to arrive at vaccination. Into the history of this, which is elaborately detailed, we shall not enter, but go at once to the practical points: these relate to the selection of lymph, the manner of making the incisions, and the number of them which is required to secure the full prophylactic effect. On these points we shall quote Dr. Gregory's opinions.

"The proper time at which lymph may be taken so as to obtain it in the most efficient state for propagating the disease, has also been a subject of discussion. Some have objected to the employment of very early lymph, others have scruples in taking lymph after the first appearance of areola, and all parties have concurred in condemning the use of lymph taken on or after the tenth day. The facts bearing on this question are as follows. The younger the lymph is, the greater is its intensity. The lymph of a fifth-day vesicle, when it can be obtained, never fails. It is, however, equally powerful up to the eighth day, at which time it is also most abundant. After the formation of areola, the true specific of cow-pox becomes mixed with variable proportions of serum, the result of common inflammation, and diluted lymph is always less efficacious than the concentrated virus. After the tenth day, the lymph becomes mucilaginous, and scarcely fluid, in which state it is not at all to be depended on. Out of a dozen incisions made with such viscid lymph, not more than one will prove effective. The scabs of cow-pox, ground to powder, and moistened with lukewarm water to the consistence of mucilage, will sometimes reproduce the disease in all its purity, a satisfactory proof that the alteration which the lymph undergoes in its progress to maturity is not of a specific kind, liable to influence the result of the subsequent vaccination, but simply dilution. Experiments with diluted lymph were formerly made by Dr. Adams, at the Small-Pox Hospital, and have since been repeated in France by M. Bousquet, and it is ascertained that effective vaccination may be thus produced.

* * * *

"2. The second subject for our consideration is the mode of making the incision, so as to ensure the best and most certain results. Failure in the operation is always harassing to the friends, and is often made the pretext for delays dangerous to the child. Some surgeons use a sharp, others prefer a blunt lancet. Some consider it necessary to make the wound very superficial, others go deeper, and are careless whether much or little blood follows the incision. A few operators scarify the skin in numerous places, in preference to making incisions. I know very well that, provided the lymph be good, it matters little in what way the virus be applied, but the most uniformly successful mode is the following. Let the lancet be exceedingly sharp.

It should penetrate the corion to a considerable depth. The notion that the subsequent effusion of blood will wash out the virus, and thus defeat our intention, is quite imaginary and groundless. Provided that a genuine lymph of due intensity has once come in contact with the absorbing surface of the cutis vera the rest is immaterial. The vessels of the part have received the specific stimulus, and nothing can prevent the advance of the disorder but some constitutional cause. In making the incision, the skin should be held perfectly tense between the forefinger and thumb of the left hand. The lancet should be held in a slanting position, and the incision made from above downwards. * * *

"3. I would recommend that with lymph of ordinary intensity five vesicles should be raised, and that these should be at such distances from each other as not to become confluent in their advance to maturation.

"Vaccine lymph should always be used in a fluid state, and direct from the arm, wherever practicable, for it is a very delicate secretion, and very slight changes in it are capable of materially altering its qualities. Lymph which has been retained fluid for four or five days is very apt to occasion that irritable vesicle which I described to you as the most frequent of all the anomalous appearances. Dr. Gulliver has lately been occupied in attempts to discover, by means of the microscope, what is the exact change which vaccine lymph undergoes by keeping, and which gives to it this noxious quality. His observations have not hitherto yielded any decisive results, but enough has appeared to warrant further and more extended inquiries.

"When lymph fresh from the arm cannot be obtained, other means must be had recourse to. Vaccine virus may be preserved fluid and effective for two or three days in small bottles, with projecting ground stoppers, fitted to retain the matter. It may be preserved for a like time in small capillary tubes having a central bulb. This is the mode usually adopted in France for the transmission of vaccine lymph to the provinces, and which proves very effectual; but if you attempt in this manner to transmit lymph to the East or West Indies, you fail utterly.

"You must all have seen what are called ivory points. These, when well armed and carefully dried, are very effective. They will retain their activity in this climate for many months, and they are found to be the most certain mode of sending lymph to our colonies. Some practitioners prefer glasses to points, but they are less certain. The employment of scabs for the propagation of cow-pox was first recommended by Mr. Bryce, of Edinburgh, in 1802. It is a very excellent mode of transmitting vaccine matter to distant countries, but some nicety is required in operating with scabs, which experience alone can teach."

The pathology and results of vaccination are next detailed, under which he discusses the ideas entertained by Jenner and others as to cow-pox and small-pox being modifications of each other. He then refers to the experiments and reasonings of other writers, but concludes by giving it as his own opinion that the disorders, though allied, are not identical. He afterwards proceeds to point out, as distinguishing marks, that the one (cow-pox) produces no eruption or constitutional disturbance—that it is not contagious, or rather that it "throws off no contagious emanations", and that it is communicated from one man to another in the same degree of intensity, whereas in small-pox the severity of the disease is diminished by inoculation. Again, with respect to the local characters — in small-pox the pustule is *accuminated;* the corion sloughs, and the adjacent cellular membrane becomes implicated. The areola, too, differs, being circular in cow-pox and irregular in variola. He thus concludes this part of the subject:—

"On all these grounds I demur to the theory of identity, and hold that small-pox and cow-pox are antagonist affections—that cow-pox, instead of being, as Dr. Baron maintains, of a variolous, is, in fact, of an *anti-variolous* nature—that it alters and modifies the human constitution so as to render some individuals wholly, others partially, and for a time, unsusceptible of small-pox.

"I have gone into this detail, because the doctrine of identity is now very generally received throughout this country, and I cannot but think it has been hastily adopted. The difficulties into which such a doctrine leads us

will be made very manifest when we have investigated the facts regarding post-vaccine small-pox."

We find next an interesting account of the statistics of small-pox after vaccination, but we have, on former occasions, laid our author's opinions on these points before our readers, and therefore omit them here. On the subject of re-vaccination he is in favour of its adoption, because it gives little pain or inconvenience, yet he doubts whether it adds anything material to the security of the individual.

But we must have done. Time and space alike warn us to bring our observations to a close, and we take leave of our author with regret, strongly recommending his work to all who desire to possess the best information on the subject of the Exanthemata.

MEDICAL GAZETTE.

Friday, October 27, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

ELECTIONS.

It would be paradoxical to assert that we are not a very representative or elective people; but to the middling classes the theory of our constitution has so thoroughly assured the right of being represented, that the majority do not much care to inquire whether they are so or not, or to exercise an undoubted privilege, though any attempt to deny their right would be angrily resented.

It is true that the business of elections in political matters is carried on from various motives with a good deal of spirit, though the franchise does not seem to be exercised in a very sober or deliberative manner, and many voters, no doubt, are rather driven to the hustings by laborious personal instigation than attracted by a desire to carry out their political opinions. In municipal contests it is much the same—in more private matters, such as charities, benefit societies, and others, in which each member is supposed to take a warm interest in the institution which he voluntarily supports, the difficulty of inducing governors to vote is often very great; and although in a spirited contest a large number of quiet people may be dragged to the poll in the train of the different candidates, it is evident that most of these are conscripts, not volunteers; while the large number who are permanently marked in every canvassing list as never voting, is too remarkable to escape notice, and proves how determined in many is the state of indifference.

The truth seems to be, that we trust very much to the results of common sense in the details as well as in the principles of our private and public governments, and moreover that this trust arises from each of us being conscious of possessing an average share of this valuable quality himself, and therefore readily giving credit for an equal or greater amount of it in others. In like manner common honesty, which usually accompanies common sense, induces its possessor to give others credit for at least as great a share of it as he has himself, and when we read the letters of competitors for offices of trust, we generally suppose each man to be capable and willing to discharge the duties of the office which he seeks; the somewhat high-flown language of the candidates, and of those who recommend them, being considered as mere *phrases de convention*, no more intended or likely to deceive than the "most obedient humble" service tendered at the foot of the letter.

Englishmen, we said, give each other credit for common sense and common honesty, and so they vote with indifference, or under the influence of personal regard, or they do not vote at all: they pay their subscriptions, and

trust the details of management to the few who prove their zeal by the habitual devotion of their time and attention, as well as of their purse, to the object in question.

But uncommon sense, and uncommon honesty, excite something like indignation towards those who pretend to them. We require strong proofs of qualities so much above the average—so much above our own habitual estimation of ourselves, even when exalted for the time by the challenge it has received. Instinctive repugnance to such assumption either excites us strenuously to oppose the attack on our self-esteem, or is appeased by the proofs of real superiority which are called forth by resistance.

This opposition, then, to large pretensions, is a most wholesome element in promoting an average, though somewhat supine, performance of the elective functions; and is, at the same time, a valuable index to the general qualities of the individuals concerned.

Particular seasons and circumstances, however, interrupt for a time this quiet belief in ourselves and others, favour the exaggerated claims of pretenders, and give a feverish stimulus to the pulse of society.

It is to be hoped that by the wholesome working of the new charter of the College of Surgeons, the elective functions of one division of our brethren may be kept in a healthy state; neither torpid from total disuse, nor irritated by over excitement.

QUACKERY.

It is curious to observe the circumstances which make people the prey of quacks. There must be first a strong desire for some apparent or real good—health for the sick, bread for the hungry, rest for the overworked, employment and pay for the unemployed. There must be a belief in our own powers to attain these advantages if the proper means were brought within our reach, and a further belief in our power to discriminate the persons and the methods most likely to secure them. This belief in our own sagacity in choosing the best means of relief is the predominant quality in the dupes of quackery: it produces a morbid state of the elective function, which, like other functional disturbance, if long continued, is apt to induce organic disease—and a very troublesome disease it is to the sufferer and those about him. A few weeks ago we met with Father Matthew in a swamp in Bermondsey. If ever dram-drinking were excusable, it was in such a place. But the ruddy, good-humoured apostle of temperance preached away *de bon cœur* to fit audience, though few. As one batch of dram-drinkers after another took the pledge, it was impossible not to wish they might keep it. But just behind the scaffold of the water-drinkers was a gallant Captain, well known to all frequenters of public meetings, who was holding forth on the virtues of his inhaler, and promulgating his very remarkable theories of disease and political economy. In substance they are these: that the nerves are hollow tubes; that there is no such thing as a solid in the body; that the great *fomes mali*, the exciting cause of all modern maladies, is white vitriol prepared from human and other bones, for the bakers and brewers, and put into the beer by the orders of government, to brutalize the people, and render necessary the employment of soldiers and policemen. Either in spite of, or in consequence of this instructive lecture, many persons cheerfully underwent the process of inhaling the smoke of a wax candle, and listened with much attention to the advice of the lecturer; and a young man who begged them not to believe in the

sorry delusions of a well-known lunatic, narrowly escaped rough handling, being denounced as a spy and emissary of the doctors.

Now surely the term "debility in action," which has been ingeniously employed to express a morbid state of the bodily functions, is no less applicable to the mental state of these patients. Their elective functions, exceedingly feebly performed in general, were excited by the doctrines and the arguments of the tea-totallers who had come amongst them, and so, with full confidence in the sagacity with which they had chosen a drinking creed, they proceeded forthwith to choose their medical adviser as above described. The Captain, by the bye, shewed much shrewdness and frankness in saying: "I always follow Paddy Matthew, for he brings out the sick, the lame, and the lazy."

Yet what in these poor people seemed so incredibly silly, that the whole scene was a kind of anachronism in the 19th century, a *tableau-moyen agiste* revived in the metropolis of England, may be found every day amongst the wealthiest of our countrymen, as those can testify who have to deal with the sick, the lame, and the lazy in high places.

About the same time we met with a highly intelligent peer, who consults the most eminent men in the capital for form's sake, and without the slightest belief in their powers of relieving him, but who was expecting with impatience the arrival of a doctor from Vienna, whom he intended to retain in England, at a liberal salary, while superintending a course of a secret remedy for gout, which he determined to undergo.

It is not one of the least evils of quackery, that its pretensions are not always wholly unfounded; nay, the resources of legitimate medicine are sometimes recruited from its ranks. The London Pharmacopœia retains the paste of Ward, and the powder of Dover, who flourished in the reign of Queen Anne. The men were of unequal merit, their nostrums were alike valuable, and in the lines of Pope their names are embalmed together.

> "See Ward by battered beaux invited over,
> And desperate misery lay hold on Dover."

VITAL STATISTICS OF SHEFFIELD.

To the Editor of the Medical Gazette.

Sir,

In your journal of September the 8th, we observe some extracts from a work by Dr. Holland, entitled "The Vital Statistics of Sheffield," and we think the comments that follow are not very complimentary to the feelings of a public man (than whom none is more deserving of the respect of the working classes of Sheffield.) Giving you credit, which we do, for purity of intention, we cannot help thinking that you have fallen into the same error in respect to his character and motives as some other writers have done. Justice and gratitude, therefore, impel us to say a few words on those heads treated of in your remarks. In the first place we beg to say, that it is not our intention to make any lengthened comments on those trades which are in union, nor on the advantages resulting from the same, as we take precisely the same view of the subject as Dr. Holland, and like him may perhaps be accused of entertaining Malthusian doctrines.

The silver and plated trade is spoken of, but in a manner that leaves but little room for argument. It is very true that the workmen in this branch have felt but little of commercial depression for at least twenty years. Previous to that period, however, they were in a very depressed state, owing to the numerous surplus hands which had been created, the result of a disorganized condition. In consequence of this many were driven upon the parish funds, while the far greater part that was employed, was only partially so, which rendered it impossible for them (a few cases excepted) to eke out anything like a comfortable livelihood. We have certainly no criterion as to whether you are favourable to trades' associations or otherwise; the vague manner they are spoken of prevents us from forming any correct conclusions concerning your opinions. We

shall make but few remarks upon what is said upon the saw-makers, the edge-tool makers, the file trade, and other branches in union, which are named by you; nor shall we stop to make any inquiries about "blacksmiths drinking more than they reason" (?) nor why it is that forgers of Sheffield should have such big occiputs, but low retreating foreheads! We are too much identified with the welfare of trades' unions to trouble our heads with the above matters. Our business would be, to prove, if desired, that as far as Sheffield is concerned, her artizans who have been the longest in union have had less fluctuations in their respective trades, more of the comforts of life, while the greatest harmony exists betwixt them and their employers. Something is stated about the edge-tool makers, which implies a defect in respect "to how long a period the men are in work," and for what length of time they have received a certain statement of wages. These are questions we are not prepared to solve; we can only say, they have been in union for a long time, and as a consequence have had fewer fluctuations than almost any branch of artizans in this town.

No writer ever displayed more anxiety to ascertain facts than Dr. Holland: every statement that he has made relative to the circumstances and education of the artizans of Sheffield can be borne out by the strongest evidence; and they form a striking contrast to those trades that are named in the journal as not being in union. We shall now offer a few remarks upon the most important of them. We begin with the spring-knife makers, who, we know for a fact, are badly remunerated and badly educated. A few of the superior workmen may earn the specified sums, viz. from 30s. to 40s., but the far greater part of them cannot earn above 12s. or 14s. per week, labouring as they do thirteen or fourteen hours per day, and in many cases not above 8s. or 9s. At the time Dr. Holland wrote the above work, this branch was not in union, nor had it been for a number of years, which accounts for the setting up of little masters among them, no laws existing to restrain them. That these little masters have inflicted a great injury upon the trade there can be no doubt. The table-knife hafters are placed upon the same footing in respect to condition and circumstances, and they and the spring-knife makers have a far greater proportion of hands than is to be found in any two trades in Sheffield; and painful to relate, a far greater number, as compared with other trades, are to be found on the parish books.

We now come to a most important branch, the fork grinders, an ill-fated class of men, as indeed other classes of that body of men called grinders are. The appalling rate of mortality among fork grinders, which is commented on, is confirmed by their own printed statements. Some fault, we perceive, is found with Dr. Holland for not giving a statement of their wages: we will attempt to supply the deficiency. We have it upon authority on which we can place the utmost reliance, that the average wages of the men, assuming them to have plenty of employment, will not exceed 15s. or 16s. per week; from this sum 5s. or 6s. must be deducted weekly for wheel-room and cost of tools, leaving them about 10s. clear money. This is the remuneration of a useful class of artizans, whose occupation is so destructive to the human constitution, that, according to the language of the late Dr. Younge, of Sheffield, "none but the worst of felons ought to work at it." It is asked, and we hope humanely, "Can nothing be done for the fork grinders?" We say at once that something might and ought to be done, not only for them, but for other grinders who are similarly situated. The substitution of wet stones, which you suggest, for dry ones, is not practicable, or the trial would have been made long since. Every fork grinder would ridicule the attempt; but assuming it possible, we fear it would only mitigate and not remove the evil, a gaseous effluvia arising even in wet grinding from the particles of metal and stone. Yet even then, one part of their trade—we mean the finishing work—would have to be done on glaziers, in which process a dry powder is used. There are other grinding branches, as the scissor and razor grinders, who work upon dry and wet stones, yet the mortality in the two trades is nearly as among fork grinders, and the remuneration for their labour is very little if any better. In our opinion the best method of bettering their condition, and prolonging their lives, would be by an act of Parliament, to do away with cast metal cutlery; to force every manufacturer to strike his own name upon the articles which he makes; to compel proprietors of grinding wheels (which is urged by Dr. Holland) to ventilate them, which might be done by a cheap and simple process, and this would be a sure means of prolonging the lives of grinders generally. We are sure that a more disinterested advocate for such a measure than Dr. Holland could not possibly be found.

To enumerate all the miseries of the aforenamed artizans would almost fill a volume: a large portion of them, we are sorry to say, have been produced by their own folly. Instead of limiting the supply of hands in a ratio with the demand for labour, which ought to have been done,

they have gone on step by step increasing them, and their miserable condition has been augmented in the same proportion. This fact speaks loudly for itself in all the disorganized trades of Sheffield. We will, for example, cite the razor grinders. In the year 1810 the number of adult workmen was 96; in 1814, 124; in 1826, 162; in 1832, 188; in 1837, 228; in 1842, 275; in 1843, 300.

The minors in this unfortunate branch have increased in the same ratio; the consequence is, the demand for their labour has been diminished, and the prices have gradually been lowered. Thus a combination of circumstances has had such influence over this class of artizans, that the far greater part of them are a miserable set of men, stunted in growth, attenuated in their forms, presenting cadaverous and care-worn countenances, which abundantly prove the dire influence of the trade on the one hand, and very little of the comforts of life possessed on the other; in a word, of a body of men whose appearance denotes that they are destined for a premature grave. We ask, in the language of the man whose powerful advocacy of the rights of labour has entwined himself around our best affections, "Is this a picture which the philanthropist can contemplate with indifference? Is it in harmony with the growth of luxuries, the boasted diffusion of intelligence, and the spread of Christian principles?" Suffer us further to ask, does not the unfortunate condition of the above important class of human beings call for some legislative enactment on their behalf? You take Dr. Holland to task in respect to his sentiments on the amount of "religious instruction and education in our locality;" we certainly coincide with him in opinion, that the education imparted by Sunday-schools is insufficient, and of a superficial character; yet we, in common with many others, do not regret the loss of the late ministerial measure, as we think it was too bigoted and exclusive in its views, and therefore more calculated to be a bone of contention than to afford any permanent benefit. But if Dr. Holland asks for more schools, we do not agree with you in opinion, viz. that he might contribute the "profits of a work" containing elaborate and extensive researches, and much varied information, the execution of which must have cost him immense labour and considerable money. "The labourer is worthy of his hire," and whatever profit or advantage may accrue to him from it he has a right, consistently with the eternal principles of justice and equity, to dispose of that profit and advantage as he may think proper. If we are to have more education (and we are advocates for a system as liberal and comprehensive in its character as can possibly be framed) we would suggest one that ought to emanate from the legislature rather different from that of Sir James Graham's. One of the Acts of the late government will not be easily erased from our memory; we mean the £20,000,000 granted to a body of monopolists who were already sufficiently gorged with wealth, and even luxury, in order that they might be induced to let go their hold of that impious and execrable traffic, black slaves. In alluding to this subject, we can and do most freely accord our meed of praise to the eloquent appeals that have been made, both in and out of Parliament, in their behalf, though, after all, it is but one-sided humanity. We are among those who detest slavery and tyranny in every shape and form, and we regret to say that we can see too many instances of it in this miscalled happy land, but particularly in our own locality. There are numerous artizans in Sheffield whose condition and circumstances can be proved to be no better than that of the African slaves in their worst state. To prove this we will only name one or two facts out of a multitude. In Sheffield, a single man (and there are great numbers on the parish) receives about 2s. 6d. per week, part of which is paid in bread. The scale of the married man is, if anything, worse, taking his family into consideration. The scale was originally 3s. for a single man, but the Guardians have recently thought proper to reduce it 6d., and that of the married man 1s., part of which sum is paid in bread, and this is often of a bad quality. For this they are condemned to heavy task-work every day, and in many cases to wheel barrows containing about 16 stones of rubbish, 14 pounds to the stone. No wonder, then, that the poor creatures, existing as they do upon such a miserable pittance, should sink under the load, as they have frequently done, while others have been hurried off rapidly to premature graves. Yet this is but a small sample of the many miseries that are inflicted upon our artizans, owing to the working of the Poor-Law Amendment Act,—a law so inhuman in its operation, and so callous to all the finer feelings of human nature, as would never be attempted to be inflicted on the black slaves by the worst portion of their owners. Their own interests would teach them, that, to perform their labour daily, slaves must be fed.

We shall now close this part of the subject by pressing upon those philanthropists who have said so much about African slavery, and likewise those who entertain liberal sentiments respecting education, the necessity of urging government to do something to amend the

physical and mental condition of myriads of white slaves at home. We think it would be no more than an act of justice, if half of the £800,000 that is paid to the owners of black slaves annually out of the taxes, and which they might very well spare, were applied to the white slaves of this country: this would be one means of answering the end required, and one which would render the government deservedly popular. We should extend our remarks far beyond the limits of a letter, were we to give full scope to our feelings upon the above subject. It is now, however, high time to say a few more words respecting Dr. Holland, who it appears is represented to be rather uncharitable towards the sick, "in a pamphlet he published four years ago." Assuming this to be a fact, what then? We do not hold the Doctor to be infallible, he is as much the creature of circumstances as any other man, and it is quite certain that at the time he wrote his pamphlet Sheffield was in a far better state in respect to the condition of its artizans than at present. This being the fact, there would be fewer cases of real want in regard to medical charity than now. If we were to enumerate all the charitable acts, and others of the greatest utility, that have been performed by him, and without the least ostentatious parade, we might name a long list. No man in Sheffield ever displayed more sympathy for grinders than he has done. Not long since he wrote a pamphlet in favour of the fork grinders, which made a powerful impression on the wealthy and influential classes, and this was the means of getting this unfortunate class of men betwixt two and three hundred pounds. So strongly was the public mind impressed in their favour, that it was their own fault they were not benefitted to double the amount. Subsequent to that period he has written pamphlets in favour of the pen-knife and razor grinders, which, like the one named, produced a powerful impression, and which ought to be in the hands of every artizan. As to the sufferings of grinders, the result of their occupation, we always find him ready to alleviate them, and in many cases he has succeeded. We equally find him the strenuous and powerful advocate of the rights of labour in all meetings or assemblages of various classes of artizans. He is ever ready to attend to offer his counsel and assistance, to warn them of danger, and to point out their true interest, not caring about his own ease or interest. These, and innumerable acts of kindness, he has performed to various individuals, without ever receiving a farthing advantage in return, or expecting to do so. Actions like these in our opinion far outweigh any objectionable sentiments he may entertain on medical charities which may have emanated from his pen, and will not diminish an iota of that respect we entertain towards him, and which justice impels us to say is no more than his due. We shall now close this lengthy epistle, and request, as a particular favour, that it may be inserted in the next number of your widely circulating journal, whose pages are devoted to one of the most important branches of science that can possibly occupy the human mind. As a ground for urging this request, we hope it will be borne in mind that Dr. Holland has been spoken of in a manner that is not quite congenial to our feelings. A desire to do justice to him, as well as to point out means whereby a very important class of the community might be benefitted, has induced us to indite the preceding remarks. In conclusion we again respectfully request the insertion of them, and by so doing you will greatly oblige the delegates of the associated trades in Sheffield.—I am, sir,

Your very obedient servant,

JOHN DRURY, *Secretary*.

Sheffield, September 25, 1843,

POISONING WITH SULPHATE OF POTASS.

[SOME observations have been made on this subject in a letter published in the *Times*, in which reference was inaccurately made to this journal; we therefore insert the following answer, which was transmitted to the journal above named.—ED. GAZ.]

SIR,

In the *Times* of to-day there appears a communication, signed by "A Surgeon," which is distinguished by two faults; it is both disingenuous and inaccurate — disingenuous, because your correspondent's remarks in reference to the MEDICAL GAZETTE omit all notice of "*six cases* of poisoning by sulphate of potass," inserted in the number for October 13th, your correspondent's letter being dated on the 15th; sadly inaccurate, because he states that "*arsenic*, zinc, or copper, may, during the process of manufacturing nitric acid, be readily transferred, either as a whole or a part, to the residual sulphate of potass, thus contaminating it with a most dangerous poison; and further, "A Surgeon" adds, what is most untrue, "that this statement is no idle theory, but is sustained by direct experiment." Indeed, sir, but this is an idle theory, and has been refuted by my direct experiments. A chemist will need but the following detail to recognize at once the truth of my assertion, but which assertion I have verified by experiment.

With a view to remove the whole of the nitric acid from nitrate of potass, the manu

facturer uses a proportion of sulphuric acid sufficient to form an acid—or bisulphate, strictly speaking a mixture of sulphate and bisulphate of potass; heat, and this approaches to dull redness, is applied to drive off the whole of the nitric acid: now, should the normal sulphuric acid have been contaminated with arsenic, the heat here applied would and *does* volatilize it; further, the subsequent neutralization of the residue with carbonate of potassa, and crystallization of the salt, which is somewhat insoluble, would also leave in the mother liquor any arseniate of potass, should any arsenic have been added intentionally; a further guarantee that, in the process of manufacture usually adopted, on account of its low cost, there is no risk of contamination with arsenic.

Commercial oil of vitriol, I may venture to say, does not contain arsenic now. During the time of the sulphur monopoly, chemists were driven to prepare it from iron pyrites; and it was then ascertained that occasionally a little arsenic was derived from this source. Its admirable purity and lowness of cost have rendered it sought by all continental nations as the best that can be procured, but the above circumstance is now dragged in to shield every crime, and explain every difficulty, where sulphuric acid or sulphates are brought in question.

This question will doubtless be solved at the trial, since I have reason to know that the Messrs. Watt, as well as myself, have tested sulphate of potass "taken from the same jar," identical with that used by the party charged with the crime of murder; and if any benefit of a doubt can be afforded, the Messrs. W. will advance it. For my own part, although I have an opinion, it will not be communicated, so far as regards this point, until the trial is over, having no wish to enlighten juries unless by conferring a benefit on those most deeply interested. The prudence of your correspondent in withholding his signature deserves all the praise he may have anticipated from his communication; indeed, I should have hesitated in submitting these remarks, so entirely counter, and as he himself will I doubt not grant, yet so strictly accurate when submitted to the test of direct experiment, if it had involved the dissolution of the chemistry of perhaps a talented member of the profession.—I am, sir,

Your obedient servant,

A Drug-vendor.

P.S. I enclose my card withal.

To the Editor of the Medical Gazette.

Sir,

From your remarks on the late inquest, you do not appear to be aware that several cases of poisoning by sulphate of potass have appeared in the foreign journals. The only notices of these cases to which I can now refer you, are in the Pharmaceutical Journal for September, and the Chemist for August, in the present year. M. Moritz ascribes the poisonous effects of the salt to the presence of *sulphate of zinc*; others to *arsenic*, derived from the arseniferous pyrites from which sulphuric acid is now commonly procured. The question is one which demands, and will doubtless receive, a prompt and careful investigation.—I am, sir,

Your obedient servant

H. B.

Oct. 9, 1843.

P.S.—Dr. Pereira remarks that large doses are apt to produce sickness in children; but he does not appear to suspect that this effect is the result of any impurity in the salt.

HÆMORRHAGE.

To the Editor of the Medical Gazette.

Sir,

If the following hint be deemed worthy of a place in your valuable journal, you will oblige me by inserting it.

A Student.

Oct. 17, 1843.

Some months ago there was described, in a number of the Medical Gazette, a simple, easy, and efficacious method of treating epistaxis; of its efficacy I can speak highly, as I have on several occasions put an immediate stop to profuse hæmorrhage from the nose by adopting that plan. The treatment consists simply in making the patient hold up both arms above his head, when the bleeding will be found soon to cease.

Might not the same plan be pursued in cases of alarming hæmorrhage, that occurs in some persons, after the extraction of a tooth?

MARISCHAL COLLEGE AND UNIVERSITY, ABERDEEN.

REGULATIONS FOR GRANTING MEDICAL DEGREES.

Curriculum.

I.—Four years of attendance on Medical Classes, of which one year may be passed at any recognised Medical School; but three, at least, must be passed in a University, including one, at least, in this University. The attendance, in each year, to embrace not fewer than two Medical Classes of six months,

with two of three months each. But it will be held equivalent to *one* of four years of such attendance in a University, 1st, in a Master of Arts, to have attended one Medical Class while passing through the Curriculum of Arts; or, 2dly, in any Student, to have attended a Medical Class, in each of two years, along with the Classes in the Curriculum of Arts. The University attendance to include the following eight Classes, each for a Course of six months—Anatomy, Practical Anatomy, Chemistry, Materia Medica, Institutes of Medicine, Surgery, Practice of Medicine, Midwifery, and the following three Classes, each for a Course of three months—Botany, Practical Chemistry, Medical Jurisprudence.

2.—Eighteen months of attendance on the Medical and Surgical Practice of an Hospital containing not fewer than Eighty Beds, along with attendance for six months on Lectures on Clinical Medicine, and for three months on Lectures on Clinical Surgery.

3.—Six months of Compounding and Dispensing of Medicines in the Laboratory of an Hospital, or of a Public Dispensary, or of a licensed General Practitioner, or of a regular Dispensing Druggist.

Exemption to Practitioners.

4.—It will be held equivalent to the Curriculum prescribed in the three Regulations foregoing, to have obtained, upon examination, a Diploma or a License, in Medicine or in Surgery, from a University or other Authority established by law within the United Kingdom, and to have subsequently attended Medical Classes in this University for one year.

Examinations.

5.—The Examination Terms to be two in each year—the *first* to commence on the 20th of April, if a Wednesday, but if not, on the first Wednesday thereafter; the *second* on the 13th of October, if a Wednesday, but if not, on the first Wednesday thereafter.

6. Every Candidate to undergo at least three separate Professional Examinations—the first Pharmaceutical, the second Surgical, the third Medical—to be conducted partly in writing as well as *vivâ voce*, and partly by demonstration.

The *First* to include Chemistry, Botany, Materia Medica, Pharmacy, and the Doctrines of Physics relating to Specific Gravities, to Gases and Vapours, and to Climate.

The *Second* to include Anatomy, Institutes of Medicine, Surgery, and the Doctrines of Chemistry and Physics illustrative of animal Structure and Function.

The *Third* to include the Practice of Medicine, Midwifery, and Medical Jurisprudence.

7.—Every Candidate, not a Master of Arts, must undergo a Preliminary Examination on the Latin Language (the Book to be used being *Celsus de Medicinâ*), and on the Etymology of such Terms in the Medical Sciences as are derived from the Latin and the Greek.

8.—Any Candidate that so desires shall be admitted to each one, or to any two, of his three Professional Examinations, at different Terms; but not to the First Examination, until the beginning of his third year of Medical Classes; nor to the Second, until the end of his third year; nor to the Third, until the end of his fourth year, and until he be twenty-one years of age; nor shall a greater interval than eighteen months be allowed between two successive Professional Examinations, without a full renewal of the previous one or two. The Preliminary Examination must be passed at the same Term as the First Preliminary Examination.

9. In order to be received for Examination, certificates must have been lodged with the Professor of Medicine, on the first day of the month of the Examination Term, shewing that the Candidate is of the required age, that he is of good moral character, and that he has passed through the requisite Course of Professional Education. Along with such Certificates must be lodged a Schedule, filled up in his own handwriting, containing a list of them, and specifying such additional branches of Education, professional and general, as he may have studied.

10.—Medical Degrees to be conferred at the close of each Examination Term.

11.—The degree of Bachelor of Medicine may be conferred on any Candidate who has passed the foregoing Examinations.

12.—The Degree of Doctor of Medicine may be conferred on any Candidate, after passing the foregoing Examinations, if not under twenty-two years of age, or on any Candidate who has been at least six months a Bachelor of Medicine of this University. The Candidate, if a Bachelor, shall state, in a written application, what opportunities of professional improvement he has enjoyed since he was made Bachelor.

STRUCTURE AND FUNCTION OF THE INTESTINAL VILLI.

MM. Gruby and Delafond laid before the Academie des Sciences, on the 5th of June, a paper upon the Anatomy and Function of the Intestinal Villi, in which they state, that "the villi of the small intestine are

covered not only with cylindrical epithelium, but also with another form of epithelium, which, from its situation, they have named *capitate*. Each cell of epithelium is provided with a cavity, the orifice of which is sometimes wide open, at others more or less completely closed. At the surface of the epithelium of the villi of the small intestine of a dog, some vibratile cilia not yet described, of which the function is perhaps to displace, when necessary, the coarser chyle, which is in contact with the epithelium.

"Underneath the epithelium, the villus is composed merely of a vascular and fibrous membrane, and within this membrane, of one chyliferous vessel, or canal only.

"In contracting according to their longitudinal axis, the villi become shortened, and take a conical form, of which the base is towards the mucous membrane. In contracting according to their transverse diameter, they become thinner and longer. In fine, they execute movements in every way, as we have before said in our note to the Academy on the 4th of Sept. 1842. In executing these movements, the villi empty themselves of the blood and chyle contained in their vessels, and put themselves in contact with the new parts of the coarser chyle digested from the aliments. Each cell of epithelium must be considered as an organ especially designed to receive the coarser chyle proceeding from digestion, and to convert it into an homogeneous chyle, formed of an infinity of small molecules, held in suspension in a transparent and spontaneously coagulable liquid. These molecules, and the liquid, are the only parts fit to pass through the deep orifice of the epithelium cells, in order to get into the one chyliferous vessel placed in the centre of the villus.

"Each cell of epithelium has a quadruple function:—1st. To fill itself with the coarser chyle proceeding from the digestive process. 2d. To divide and attenuate this chyle, and convert into a pure and homogeneous chyle. 3d. To expel this liquid, so elaborated, and direct it towards the chyliferous canal through the vascular and fibrous tissue. This apparatus we have named chylogenous. 4th. In fine, to imbibe the substances dissolved by digestion, and to make them enter the vascular apparatus."—*L'Experience*, and *Physiological Journal*.

QUALIFICATION FOR GENERAL PRACTICE.

To the Editor of the Medical Gazette.

SIR,

YOU are, no doubt, aware that the medical institutions in Scotland differ materially in some respects, from those in England and Ireland. For example; there is no incorporation of Apothecaries in Scotland, nor is there any such distinct class of practitioners; they are either surgeon-apothecaries, or not in any way distinguishable from chemists and druggists; consequently the Edinburgh College of Surgeons include in their examination and curriculum those branches of medical science which are in London, as I understand, left to the examiners at Apothecaries' Hall. Now I and some other readers of the MEDICAL GAZETTE would feel very greatly obliged by your informing us through the medium of your periodical whether the London College of Surgeon includes in their examination materia medica, chemistry, and the practice of medicine, and whether the diploma of the said College is understood to be sufficient to qualify for general practice in all respects, with the exception of compounding and dispensing medicines.

I am, sir,
Your obedient servant,
AN OLD AND CONSTANT READER.

Oct. 21, 1843.

[The examination at the London College of Surgeons includes materia medica and chemistry, only so far as connected with surgery; but does not extend to the practice of physic; neither does their diploma qualify for "general practice."—ED. GAZ.]

PHYSICIAN PRACTISING AS AN APOTHECARY.

To the Editor of the Medical Gazette.

SIR,

I AM at no loss in surmising the source of the communication relating to me, contained in your journal of this day (Oct. 21).

I was recommended to insert in the local paper the letter to which allusion is made, in order to counteract a rumour made current by some "*kind friend*," in reference to my future course of practice; which was calculated to do me much injury.

Not feeling myself called upon, however, to give your *disinterested* informant the explanation he probably desires, I beg to state I am most fully prepared (should it be required), to satisfy the College of Physicians that my intentions of practising are perfectly consistent with their regulations. I shall feel obliged by your inserting this in your next number.—I am, sir,

Your obedient servant,
FRED. GEO. REED.

Hertford, Oct. 23, 1843.

NOTTINGHAM LUNATIC ASYLUM.

On the 28th of September Dr. John Calthrop Williams, one of the physicians to the Nottingham General Hospital, was elected physician to the Nottingham Lunatic Asylum.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, October 19, 1843.

Kirby Kittoe, London.—Henry Dixon, London.—John Hales, North Walsham, Norfolk.

UNHEALTHINESS OF PARTS OF THE METROPOLIS.

The neighbourhood of Temple-Bar and its western courts, or alleys, are at present an unhappy illustration of the fact, that closely-built houses, densely populated by the indigent or poorer classes, are dreadful sources of disease and contagion. This unhealthy spot, during the last twelve months, has forcibly attracted the attention of the parochial surgeon, whose duty it has been to attend patients in their abodes of filth, destitution, and disease. Many of the houses are here let out in separate apartments to as many families, where they cook, wash, and sleep in a confined space scarcely to be credited, without any control, their landlords living away from the premises. Consequently, from an accumulation of filth and concomitant causes, fevers are very prevalent. Last week, a family suffering with typhus were removed to the Fever Hospital, where the husband and wife died, but were brought back in shells to their former domicile, when they were deposited in the attics, and there still remain. In another house, in Ship Yard, an unhappy woman expired last Friday in a fit, and remains at present without the last offices of humanity having been performed. In short, similar cases are, unhappily, of frequent occurrence.—*Times.*

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, October 14, 1843.

Small Pox	6
Measles	33
Scarlatina	54
Hooping Cough	28
Croup	6
Thrush	8
Diarrhœa	43
Dysentery	17
Cholera	4
Influenza	1
Ague	0
Remittent Fever	0
Typhus	32
Erysipelas	5
Syphilis	2
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	145
Diseases of the Lungs and other Organs of Respiration	250
Diseases of the Heart and Blood-vessels	17
Diseases of the Stomach, Liver, and other Organs of Digestion	89
Diseases of the Kidneys, &c.	5
Childbed	3
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	4
Arthritis	0
Rheumatism	0
Diseases of Joints, &c.	6
Carbuncle	1
Phlegmon	0
Ulcer	2
Fistula	1
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	95
Old Age or Natural Decay	66
Deaths by Violence, Privation, or Intemperance	24
Causes not specified	3
Deaths from all Causes	950

METEOROLOGICAL JOURNAL.

October.	Thermometer.	Barometer.
Wednesday 11	from 37 to 60	29·02 to 28·95
Thursday . 12	40 47	28·99 29·22
Friday . . . 13	33 48	29·38 29·42
Saturday . 14	49 35	29·44 29·51
Sunday . . 15	28 49	29·44 29.41
Monday . . 16	27 45	29·41 29·40
Tuesday . 17	29 45	29·04 29·09
Wednesday 18	from 34 to 45	29·54 to 29·79
Thursday . 19	27 42	29·95 29·99
Friday . . 20	24 48	29 96 29·85
Saturday . 21	37 53	29.60 29·72
Sunday . . 22	32 56	29·75 29·68
Monday . . 23	46 57	29·71 29·74
Tuesday . . 24	47 56	29·60 29·36

Wind, on the 11th, S. by W.; 12th, W. by S. and W. by N.; 13th, N.W. and S.W.; 14th, N.W.; 15th, N.W, N.E., and N.; 16th, N. and N.W.; 17th, S., S.W., and N. by W.; 18th, N. by W.; 19th, N.; 20th, S.W.; 21st, W. by S. and N.W.; 22d, 23d, 24th, S.W.

The 11th, cloudy, with frequent rain. 12th, morning cloudy, rain about noon; afternoon and evening clear. 13th, 14th, 15th, and 16th, generally clear. 17th, generally cloudy, heavy rain at 4 A.M. 18th, 19th, and 20th, generally clear. 21st, morning raining, afternoon and evening clear. 22d and 23d, generally clear. 24th, cloudy till the evening.

Rain fallen, 1 inch, and ·04 of an inch.

BOOKS RECEIVED FOR REVIEW.

The Phrenological Theory of the Treatment of Criminals defended: in a Letter to John Forbes, Esq. M.D. &c. &c. By M. B. Sampson.

Vivesection Investigated and Vindicated. By G. F. Etherington, M.D. F.R.A.S. &c.

A Practical Treatise on Organic Diseases of the Uterus. By John C. W. Lever, M.D. &c. &c.

Errata.—In Dr. Glover's paper, in last No., p. 81, line 22 from bottom, *for* "absurd," *read* "abused"; p. 82, line 4 from top, *after* "jam," *insert* "occupant"; line 25 from bottom, *for* "rare," *read* "sure."

Wilson & Ogilvy, 57, Skinner Street, London.

THE

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CLINICAL REMARKS UPON CASES TREATED IN THE ST. MARYLEBONE INFIRMARY.

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The series of clinical observations which are to follow have arisen out of cases treated in the Saint Marylebone Infirmary. I have refrained from detailing the cases at full length, because the particular relation of them is often tiresome, and the reading, for the most part, irksome. I have therefore preferred to refer more particularly to points presenting a practical interest to the student: the details he had opportunities of acquiring himself. The subjects I propose to include in these observations are, *injuries of the head, secondary syphilis, diseases of the urethra and the rectum; bubo; scrotal hernia of large size, and hip-joint disease.*

Although much caprice is shewn in the admission of accidents into the Infirmary, a considerable number of serious injuries are treated there in the course of a year. Of secondary syphilis in its most aggravated form, many specimens are annually seen. Among our aged poor, stricture of the urethra, and diseases of the prostate, are frequent; so are irreducible scrotal hernia of a large size, and diseases of the rectum. Our schools also furnish us with many examples of hip disease. Those are the materials which called for the remarks which will follow; and although much that may be said may already be well known, something of practical value may find its way where it did not exist before.

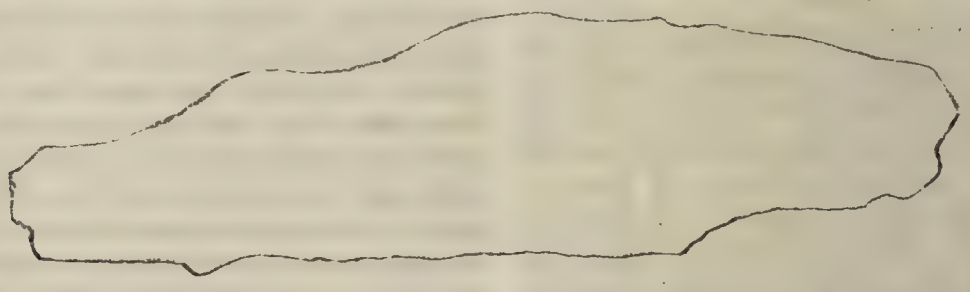
Injury of the Head.

A. B——, æt. 53, a chimney-sweep, was picked up in the street by a policeman: he was almost if not quite insensible, and his appearance shewed that a violent contusion had been sustained by the nose, but whether from a fall or from any other cause did not appear. On admission he was still insensible; but upon a careful examination it did not appear that there was any fracture of the skull. Gradually he recovered consciousness, but it then became evident that his mental faculties were very weak. Whether they had been so before the accident we had no means of ascertaining. He recovered sufficiently to express his wants, and to take food with great relish; he lived 25 days after admission. One day, while eating his dinner, his head hung upon his breast, he soon became comatose, and in a few hours died. The examination after death revealed a fracture of each orbital plate; a small portion was detached and driven inwards on each side. There was no effusion of blood; there was a little purulent matter at the injured points, and the dura mater was slightly inflamed. In this case the orbital plates had been broken by a blow received upon the nose; the nasal bones having resisted fracture, the force was directed through them upon the orbital plates, which gave way.

You also recollect the case of a lad of 15, who fell from a scaffolding, and severely injured the left frontal region. When admitted he was insensible, the scalp was torn off for a space of two inches, but there was no fracture, although there was a slight indentation. The symptoms, as in many cases, were mixed, partly those of concussion, partly compression. As he recovered from the effects of the concussion, it was observed that the right leg was powerless. So it continued, accompanied by occasional headache, sometimes intense, for upwards of a fortnight; when it was discovered that the loss of power was dependent upon injury to the part, unattended with much contusion.

In March, 1840, an Irishman, æt. 27, a plumber's labourer, living in Cato Street, was murderously assaulted by some of his own countrymen, and left in a state of insensibility. From this he recovered during the night, and on the following morning he got his wounds dressed, and proceeded about his usual daily labour. Although he continued

to work, he felt a certain uneasiness, not amounting to pain, in his head. On the twelfth day after the attack he took a glass of gin; after that he became giddy, and on his way home he fell against a shop window: received no material injury, but thought it necessary to apply for medical advice. He was seen by two medical men, but no idea of fractured skull was presented to their minds. He had purgative medicines administered to him, as well as mercurials; but his health declined. On the day before his death, the 23d from the receipt of the injury, I was requested to see him. I found him heavy and stupid, but quite capable of answering the questions put to him; the pupils were large, and rather sluggish, the tongue was dry, brown, and coated; the respiration tolerably easy: when requested to do so, he raised, without apparent difficulty, each arm and leg. Upon examining the head, I found a wound of nearly five inches long, extending obliquely backwards through the left parietal region; it was suppurating, and full of granulations. I ascertained that it had been examined twice in the 24 hours subsequent to the injury, but that no fracture had been detected. The man died on the following day. An examination of the head was made after death: on removing the scalp a certain quantity of fetid pus escaped through a cut three inches long, extending fairly through the external table, and corresponding to that in the scalp; it was a fair cut through the bone without depression, and had been inflicted, probably by the edge of a flat iron or shovel, which were among the weapons used in the assault. On removing the skull-cap, the dura mater on the injured side was found greatly shrivelled; and much of that hemisphere of the brain was broken down into a purulent pultaceous mass; the quantity of that matter which escaped was above six ounces. Implicated in the dura mater at the point corresponding to the injury of the external table, and detached from the skull-cap, was a piece of the inner table of the accompanying dimensions.



June 3d, 1841.—Sarah Shears, a married woman, æt. 33, was admitted into the Marylebone Infirmary, labouring under the effects of severe concussion of the brain. The history of the injury is tragical enough: her husband, who was a greengrocer, was unfortunate in business, and in consequence became a denizen of Whitecross Street Prison for six months. While he was undergoing this incarceration, his wife formed a criminal intimacy with another man. Soon after the husband was discharged from prison he was told that this connection still existed, and much quarrelling was the result. One day he ascertained that she was to meet her paramour; he took means to satisfy himself that the information was correct, he awaited her return home, and with a poker or shovel he struck her twice or three times over the head; she fell down, as he believed, dead; he then destroyed himself by cutting his throat. The patient on her admission was insensible, the surface of the body cold, the pulse small and unfrequent, respiration very slow. Warm applications were made to the surface of the body, and warm fluids were introduced into the stomach. She soon recovered consciousness, but remained for the succeeding two days in a somewhat comatose condition. On the scalp were three wounds, two comparatively unimportant; the third, which extended obliquely backwards along the parietal region, was about three inches long: at that point the skull was exposed, and a deep gutter extending for three inches, and implicating the whole thickness of the external table, was discovered. A probe made it pretty evident that the inner table had given way, although there were some suspicious symptoms of cerebral inflammation, there were none which seemed to justify any further exploring operation; but mercury was guardedly administered so as to excite the usual action, the diet was rigid, and the bowels kept free. The case did well, and she was discharged July 8th.

In this class of cases, where there is fracture of the skull with depression, a question which passes through the surgeon's mind very frequently is this—should I trepan? Generally the question is resolved in the negative; it is an operation not frequently performed. I am satisfied that the reasons which lead to such a conclusion, in similar cases, are very dissimilar. One man objects to the operation under any circumstances; another, though aware there is a depression with a wound of the scalp, will wait till urgent symptoms are developed, and then he will trepan; another, even in the face of threatening symptoms, admitting that there is a depression, will wait because there is no scalp wound; another will operate whether there be a scalp wound or not, provided there be a depressed bone, though there

may be no urgent symptoms; upon the assumption that the necessity will arise, and that it is better to operate before inflammation has set in.

I entirely agree with Sir Philip Crampton, that it is very desirable that a greater uniformity should exist in the practice of surgery in the different countries of Europe than at present obtains; but I would go further, and say, that it is first desirable that more uniformity should exist in the practice of the same country or even of the same town. It is surely not necessary in the present day to lay down the proposition that in a given class of cases one mode of treatment may succeed in a larger number of cases than another. At the present moment it is matter of the greatest diversity of opinion, whether, in certain injuries and diseases of the foot, where amputation becomes necessary, a point just above the ankle or just below the knee should be the place of election. One man recommends that the hernial sac should not be opened when an operation is performed for the relief of strangulated intestine; others that it should. Some advise that when pus or other fluid occupies the cavity of the pleura, a puncture should be made in front, others behind. Some recommend that the opening should be made with a trocar, others with a bistoury; in the obliteration of varicose veins, the practice of one hospital is to use caustic potash, of another to place a needle under them. It is, however, needless to multiply examples to prove what is already so well known.

That absolute uniformity of practice is desirable in a progressive science I do not maintain, because perfection may be unattainable, but greater uniformity than at present obtains could not fail to be useful. Though I admit all this, and though I agree in the opinion that the publication of clinical lectures is one means for attaining the end, still every one will concede that a fair report of all the cases in an hospital is the only mode by which the end can be fully answered. If we had only clinical lectures and clinical remarks to depend on, they would afford us only a sorry means of accomplishing what seems so desirable; and during the last seven years there has been a very decided falling off in this respect, both in the number and importance of such communications.

With respect to our subject of consideration — the operation of the trepan — Sir Philip Crampton, in 1832, says, "that the modes of practice in certain severe injuries of the head are different in London and in Dublin: that the difference consists in this—that in fracture of the skull, with depression of the bone, the trepan is less frequently employed in Dublin than in London." I am not sure he was right at that time; sure I am that at the present moment as much indisposition is felt to use the trepan in London as there can be in Dublin. It is true that if in the one case we take Mr. Pott to represent the existing doctrine on the subject in London, and Mr. Dease in Dublin, the discrepancy is very great; but the ideas on this side of the water have undergone a great change since the time of Mr. Pott, and I very much doubt whether Sir Philip Crampton would not think it proper to use the trephine in cases where Mr. Dease would have declined it. Still, in practice, the rule laid down by Mr. Dease, that "in fractures of the skull with depressed bone, whether complicated with wound of the scalp or otherwise, no attempt should be made to raise the depressed bone, unless very decided symptoms be present of compressed or irritated brain," may be more strictly followed in Dublin than in London. Here, if we take Sir A. Cooper and Sir B. Brodie as guides, we must come near to the conclusion, "that if the depressed bone be exposed, the trephine must be applied to elevate the depressed bone, whether symptoms of injury of the brain exist or not." Now here is a tangible point which might have been decided had a careful report of cases been preserved, and a healthy rule of practice might have been adopted. It would have taken shape in this way: a hundred cases of fractured skull with depression, but without symptoms of injury of the brain, were left to themselves; seventy recovered; a hundred as nearly as may be similar cases were in each case subjected to the operation of the trephine; sixty recovered. In this way we might come to the conclusion, that in all cases of fractured skull with depression, but without symptoms of injured brain, the trephine should be avoided. This is a question which might be decided in the London hospitals in the next ten years, if a judicious and uniform system of enumeration were adopted.

Any one who takes the trouble to look through the pages of periodical literature will find a very large number of cases of fractured skull, with depressed bone, which got well without the use of the trephine; very many even in which there were symptoms of injury of the brain; very many in which the trephine was applied in the absence of symptoms of injured brain, and in which death seemed to be the result of the operation. At one time I had proposed to collect the materials from those sources for a decision on the question, but the descriptions were often so vague that I abandoned the task in despair.

We must now look a little more narrowly than is generally done to the opinions of the great advocate of the trepan in England, and ascertain whether they have been fairly represented. Mr. Pott, who was a man of

original thought and great surgical ability, laid down as a rule for the guidance of his followers, that "as the number of cases of fractured skull brought under his observation were so many, he had been enabled to satisfy himself that although now and then he had seen some few of them do well without the use of the trephine, yet the much greater number whom he had seen, who had not been perforated, perished with collections of matter within the cranium, and for such, my belief that there is no other relief in art or nature, has, I must acknowledge, rendered me so very cautious and diffident, that although I will not say that I would always, and invariably, perform the operation, in every case of simple fracture, yet the case must be particularly circumstanced, the prospect much fairer than it most frequently is, and my prognostic delivered in the most guarded apprehensive manner, when I omit it." In another place he says, "perforation is absolutely necessary in seven cases out of ten of simple undepressed fractures of the skull. Still, Mr. Pott admitted "that in matters of this sort positive proof and conviction are not in our power; all that we can do is, by making a comparison of the conduct and event of a number of similar cases, to come as near to truth as we can, and to get probability on our side.

The cases recorded by Pott, in which he used the trephine, amount to 27. In nine of these, the operation was performed to prevent the development of those symptoms which accompany or follow severe contusions of the cranium. In ten, to prevent the mischief likely to follow in cases of fracture without depression. In one, to remove a portion of depressed inner table. In five cases, to relieve the brain in fractures with depression. In three, to relieve the brain from extravasated blood. Of the first nine cases, there was only simple contusion in three; wound of the scalp, with contused cranium, in six. In five, there was loss of consciousness; in four, there were no pressing symptoms. In eight cases, pus followed the trepan; in one, it was blood. In six cases, the fluid was between the dura mater and the bone; in three, it was under the membranes. There were five cures and four deaths. Of the ten cases of fracture without depression, five had simple contusion of the scalp; five had contused wounds. Pus followed the trepan in six cases, blood in two; in the remaining two there was no collection of fluid at the point. There were six cures and four deaths. In the five cases of fracture with depression there was more or less severe contusion of the scalp; in three, there were wounds. There were two cures, and three deaths. Of the three cases of extravasation, two existed without appearance of external violence; in one, there was a wound. Two were cured, and one died. Of these 27 cases, the trephine was applied in twenty-two instances after the fourth day; in seven of these cases it was used twice; in three, three times. Of those twenty-two cases, eleven did well. Of the remaining five cases the trephine was used on the first day, and three did well. It is only right to say, that in one of the twenty-two cases, in which death occurred, the patient was doing well, when he was attacked with peripneumony, of which he died. Now, although Mr. Pott would seem to recommend the immediate use of the trephine in cases of simple fracture without depression, yet of the 27 cases he has left on record it was so employed only in five instances. If we, then, judge from his practice, we should conclude that he carefully watched his patients, and did not interfere by operation until the symptoms imperiously required it.

Mr. Abernethy, an able successor in the same hospital, saw so much mischief from the almost indiscriminate use of the trephine, that he ultimately regarded it with less favour than was justly due to it, and urged so many and such valid reasons against its general employment, that a very large number of the medical men on this side of the channel have seen, or fancied, so much evil to attend upon the operation, that they have been content to let the trephine get rusty in its case. Mr. Abernethy's ideas with respect to the operation were summed up in these words:—"From all, therefore, that I have learned from books, as well as from the observations I have made in practice, and from reasoning upon the subject, I am disposed to join in opinion with those surgeons who are against trephining in slight depressions of the skull, or small extravasations on the dura mater."

Mr. Guthrie, whose experience on the subject is very great, says: "The propriety of dividing the scalp in order to examine the bone beneath, which is evidently depressed, and thus rendering a simple, although comminuted fracture, a compound one, is a matter of much greater importance, the decision of which rests upon the still more essential point, viz., whether a depressed portion of bone ought, or ought not, to be removed. "I place no reliance on the supposition that there is more real danger in a case of fracture with depression in which the scalp has been divided, than when it has been only bruised, and not divided; and I apprehend that in all cases in which a fracture with marked depression is known to have occurred in an adult, it is the best practice to divide the scalp, and ascertain the nature and extent of the depression. If the result of a great number of comparative trials should prove in favour of never, under any circumstances, raising a depressed por-

tion of bone in an adult, but of leaving it to the efforts of nature, an incision, in order to ascertain the state of parts, ought not to be made; but as such result is not likely to be obtained, according to my observations and experience, the practice recommended appears to be the best."

Sir B. Brodie, than whom no one is capable of giving a sounder opinion, lays down as a proposition, favoured by the evidence already adduced, that "it is more prudent to abstain from the use of the trephine where there is a fracture with depression of the cranium, producing at the time no unfavourable symptoms." Still, he ultimately agrees with Sir A. Cooper, that where the fracture and depression are complicated with a wound of the scalp, we should not hesitate to apply the trephine. Although he does not detail the numerous cases which have come under his observation, he says that among them were of course many of fracture with depression, followed by suppuration between the dura mater and the bone. On referring to them, he says, "I find that the cases in which suppuration takes place, where the scalp is entire, have been comparatively rare." Mr. Pott's experience is exactly opposed to this in almost every case where there was only contusion with or without fracture: if sufficient time elapsed before the operation for its formation, pus was found there. This difference shows the necessity for observing on a very large scale, before rules of practice are deduced. Sir B. Brodie does not give the results of a small experience, nor does he make his statement from a general recollection, "but on the authority of written notes made at the bedside of the patients, and, for the most part, before the question which they illustrate had ever presented itself to my mind." "Taking all these facts into consideration, and endeavouring to give its proper value to what may be urged on either side of the question, I cannot but acknowledge, whatever may have been my first impression on the subject, that it appears to me at this moment that the views of Sir Astley Cooper are well founded; and that in those cases where depression exists without any symptoms, or with only trifling symptoms arising from it, the surgeon can follow no better general rule than this: if the depression be exposed in consequence of a wound of the scalp, let him apply the trephine and elevate the depression; but if there is a depression without a wound of the scalp, in consequence of the accident, let him not make such a wound by an operation. An exception may, perhaps, be properly made with respect to very extensive depressions of the cranium, which it may be prudent to expose and elevate at all events, not because there is a greater danger of suppuration from these than from smaller injuries, but on account of the ultimate ill consequences which the patient may experience if the brain be left permanently subjected to a very considerable pressure."

Those are the opinions which at present prevail on this side the channel. Now for the other. No man had better means of judging on the proper course to follow in such cases than O'Halloran. He says, p. 2, "The various disorders incident to injuries of the head have been by no means discriminated with sufficient precision, nor have their symptoms or modes of treatment been clearly ascertained. Even the use of the trephine is now more indefinite than it was a century ago. Without doubt, there is no part of the habitable globe that for half a century past has afforded such an ample field for observation on injuries of the head as Ireland in general; this province of Munster in particular. I have had no less than four fractured skulls to trepan on a May morning, and frequently one or two. In the course of above 35 years' practice, I may safely affirm, because truly, that on an average, one month with another, from three to four cases have fallen to my share of either fractures, concussions of the brain, or extravasations. To a certainty, the observations of writers for more than a century past, far from elucidating the subject of injuries confined to the skull, and their effects, have visibly tended to throw it into greater confusion than it had been in; for instead of determining with precision the cases in which an operation (in itself extremely painful and cruel, and in its consequences dangerous) shall *only* be had recourse to, they have so multiplied them that scarce a hurt on this part, attended with untoward symptoms, that does not verge to trepanation. A fracture ought only to be sought for where the injury is received. No danger can arise from delaying this inquiry for two or three days; for it is by no means a consequence that because the skull is fractured trepanation must follow; for a fracture of the skull merely as such will heal as safely as that of the leg or the arm. It is where the bone is depressed on the brain, it is where we apprehend that the depressed parts may form acute angles, which in course of many days may cut through the membranes and wound the brain itself, that the operation becomes necessary. In fractured heads, when, upon removing the integuments, a simple division of the bone only appears, and the depression at its edges but slight, when, by a depression of the finger here, no excessive pain or heaviness appears, there is every reason to expect that we have little else to do but to dress the wound lightly with soft lint, nor suffer it to make much progress in healing for twelve or fifteen days, when, if no heaviness, drowsiness, or stupor

appear, we may conclude all is safe within, and then treat it as a common wound. But when there is any considerable depression of the bone, or the fracture is at all extended, the sooner the operation is performed the better. For though, in the first instauce, we may safely delay the operation, yet I think it much more safe and prudent, in fractures of the second class, not to wait for symptoms of depression."

Page 200.—"Every fracture with depression necessarily demands the trepan; and although cases of recovery without it may be adduced, the surgeon is inexcusable who fails to attempt, at least to propose and press it. Simple fracture with depression, when relieved on the spot, or in the space of two or three days, almost always terminates happily. In the course of more than 200 cases of this simple kind, I cannot recollect a failure in a single instance. Let us, for example, suppose an extended fracture on the side of one of the parietal bones, with a severe depression without a wound of the integuments. The touch will, to a certainty, direct you to the point of the bone deepest immersed. The head being close shaven, place the crown you would wish to use over the sound bone to the edge of the depression; with a pen, mark its periphery; then, with your knife, make a circular sweep to the bone, and remove integuments and pericranium; proceed to operation. Introduce through the perforation your elevator, and raise the depressed parts, &c.

"There is no immediate existing symptom by which a fractured skull may be known—our information must be derived from the touch and the probe. A fracture with depression is generally followed with marked symptoms; in some these appear sooner, in others later, but in none exactly the same. They are sometimes a darting pain from the sore to the forehead and eyes, an incipient heaviness, torpitude, and weight in the head. The slightest noise disturbs them. They grow lethargic, often convulsed, and, if not speedily relieved, the scene closes with death. When called in to a patient with any or all of these symptoms, especially with a heaviness of the head, and lethargic tendency some days after a violent injury to the head, you may conclude them the signs of a depressed bone. As these symptoms form the exact criterion between a simple fracture of the skull without, and a fracture with, depression, and that the former demands no operation, whereas in this latter case it cannot be dispensed with, we shall go to elucidate the position by facts. Although many instances can be given where nature unassisted has relieved herself in very desperate cases, they ought not to give too much confidence to the young surgeon, and to induce him to trifle with the precious time before him in such cases: whilst I suggest every incentive to exert our abilities to relieve nature, however unpromising the appearance, yet I constantly recommend, in every depressed fracture, when called upon in any reasonable time, never to lose a moment, nor wait for the dangerous symptoms of depressed bone appearing.

While in Scotland, Mr. Syme says, "It was formerly thought that the symptoms of compression peremptorily required the immediate performance of an operation for raising the depressed portion of the skull, or affording vent to effused blood. The ample experience of a different practice, followed in modern surgery, has proved that in most cases, unless the substance of the brain has suffered serious injury from concussion, the condition of the patient labouring under concussion will not be altered for the worse, and, in many, will amend, if some days are allowed to elapse after the injury has been sustained before proceeding to trepan the skull. If the symptoms do not diminish, or if they increase, the operation must be performed. Should depression of the skull be associated with a wound of the scalp, penetrating to the bone, a very short trial of the means calculated to supersede the necessity of an operation will be sufficient, as the fracture will be a compound one, and consequently not unlike to be aggravated in this important respect by trepanning. On other occasions, two or three days may generally be allowed to pass without any bad consequences."

Here, then, in a few words, is the difference. O'Halloran, in every depressed fracture, would take means to elevate the bone at once. Dease would make no attempt unless very decided symptoms of compressed or irritated brain were present. Sir B. Brodie believes it is more prudent to abstain from the use of the trephine where there is a fracture with depression of the cranium, producing, at the time, no unfavourable symptoms; but he agrees with Sir A. Cooper, that where the fracture and depression are complicated with a wound of the scalp, we should not hesitate to apply the trephine; while Mr. Syme would wait, even in a case of compound fracture with depressed bone.

Let us now see whether, in other countries, there be equal discrepancy on this point.

Desault, in the last five years of his practice at the Hôtel Dieu, only used the trepan once. He and his follower, Bichat, comfortably settled that, in the great majority of cases, we cannot detect the fracture or the extravasation, and that, if even we could, the patient would get well without operation. No doubt the symptoms are often very uncertain, but not so much so as they seek to

prove, and generally we do not, as they allege, confound the symptoms of compression with those of inflammation. If Bichat could not discriminate between them, he was right to abstain from the operation. The abuse of the trepan by others, he met by a counter-abuse. As against Quesnay, they may have had right on their side, but then Petit had lived before them, and the reproach of indiscreetly using the trepan cannot be fastened on him, though it may on Quesnay.

In Germany, the representatives of the two systems are Richter and Schmucker—the former approaches near to Pott; the latter to Dease. The first volume of Schmucker contains fifty cases of wounds of the head. At the seige of Schweidnitz he established an hospital for injuries of the head alone, and there it was that those observations were made. In the first twelve cases the wounds were trifling, or if the bone was bare there was very little injury done to it; the patients not being incapacitated from pursuing their ordinary avocations from the first. After some days, symptoms of cerebral disturbance were manifested; the trephine was applied, very little internal injury was detected. Little as it was expected, the patients died, and pus was found between the pia mater and arachnoid, but the brain was free from disease. Such results, from apparently such slight causes, produced in Schmucker's mind a doubt of the propriety of his mode of treatment, and he resorted to the use of cold water.

Klein, in his Journal of Surgery, lays down a broad rule, that the trephine should always be applied when the bones are fractured, though there may be no sign of cerebral irritation. He believed it should be done as early as possible, and that the fatal consequences which may follow in the case, where the operation should be deferred, should fall on the surgeon. Chelius' rule is, "that in all cases of fracture, with or without depression, and in penetrating fissures, in incised wounds with a blunt sabre, which penetrates the external table and the diploe as far as the inner table or the cranial cavity, in wounds made with a sharp sabre, when the dura mater is also wounded, in penetrating wounds made by pointed instruments, in gun-shot wounds which affect the bones of the cranium and the diploe, in cases of disjoined sutures, the trephine should be used." But probably the warmest partisan of the trephine, in the present day, is Schindler: he says, "I place as a principle, founded upon the experience of many hundred observations, that whatever may be the form of the injury done to the bones of the cranium, whatever be the instrument by which it has been made, we ought at once to lay bare the part to ascertain the nature of the lesion; we must not for a moment consider the pain of the division of the soft scalp parts, for we should know that in the greatest number of cases the salvation of the patient consists in the opportune employment of the trephine." The only cases in which he admits that we may be justified in deferring the operation are, those in which the edges of the fractured bone are so far separated as to admit of the free escape of fluid, and a probe for the purpose of ascertaining whether there be any spiculæ—cases of fracture, with or without depression in infants—cases of slight depression admitting of the free escape of fluids—cases of wounds by a cutting instrument not penetrating into the cranial cavity—cases in which a gun-shot wound has not caused the separation of the pericranium. He admits the operation to be useless, when the portions of bone can be removed without the trephine—when the injury is so great that all is powerless—in fractures extending to the base of the skull.

Graefe, in his Journal of Surgery, 9th vol. says, that the trephine makes a wound grave in itself, and likely to increase the already existing traumatic irritation. Schneider mentions nine cases of wounds of the head cured without the trephine: the patients had fallen from a great height. Kern, in his Treatise on Wounds of the Head, and on the Trephine, 1829, strongly argues against the use of the trephine; he only admits the propriety of employing it in cases of large extravasations of blood, when easily detected. Rather than risk one or two useless perforations, he would trust to the power of absorption. He rejects it in caries, but thinks it justified in severe cases of fracture with depression, though in most cases the patients will die. He is satisfied that of twenty persons subjected to the operation, in nineteen it is uselessly employed.

With regard to the use of the trephine, then, opinions are very various. One party, numbering in its ranks Dease, Abernethy, Desault, Walther, and others, seek to restrain its employment within very narrow limits; they would apply it only when consecutive accidents are manifested with a certain intensity; while another party, including Pott, Sabatier, Zang, Schindler, would advise its application more generally; they would use it not only after the development of cerebral mischief, but in order to prevent them. The one fairly rest their opinion on the facts, that fractured skulls, with or without depression, are frequently cured by judicious treatment; that extravasated blood may be absorbed; that the operation of the trepan is dangerous; that we add to an exciting injury another which is often fatal. The other party say, that the inner table is brittle, and that spiculæ may irritate the brain or its membranes; that the

vessels which unite the dura mater with the cranium are frequently destroyed and cause hæmorrhage; that the diploe is very commonly injured; that suppuration may be set up, and that the signs of compression and irritation may be consecutively developed; that when those symptoms are manifested we cannot expect much even from the trepan; that even when blood is extravasated, if we wish for its absorption, we may wait until cerebral inflammation is set up. No one, however, can deny, that fractures, with or without depression, may get well without the trepan. We might even admit, that of ten cases operated on by the advocates of the trepan, two may have got well without it. Still it must be equally admitted, that when it is not resorted to until serious symptoms set in, we have no right to argue against the operation in the abstract. What danger may immediately belong to the operation itself it is not easy to say. Mr. Guthrie thinks one in ten would die from it; other experienced surgeons think differently.

The two latter cases I have mentioned show the difficulty of laying down general principles to meet all cases of fractured skull. It has been laid down as a rule, that where you have incisions fairly through the outer table and diploe, without depression, that it is almost certain the inner table, which will not bear cutting, has been fractured, and driven in upon the brain. That after examination with a blunt probe, if it should be found to be the case, the use of the trephine is indicated, even in the absence of symptoms. A similar rule was laid down by Delpech: he says, all fragments of the inner table pushed in towards the brain ought to be removed. Now, if we look at the above cases, we might be disposed to admit that if means had been used to remove the piece of bone in the first case, the man might have been alive at this moment; but if we apply the same reasoning to the other case, do we not see that we should have exposed the life of the woman to much greater peril than that which at the moment stared her in the face? It may be said that a probe passed through the incision in the external table would inform the surgeon whether or not there were any displacement of the inner table, and that we should then be prepared to act with proper data. In the closet such reasoning might appear to be admissible, but the practical surgeon knows that such things are not so easily ascertained. Supposing the interval between the two tables to be considerable, how is the surgeon to feel secure that it was not the normal condition in the particular case? and would he be justified in applying the trephine because he found a greater than usual space between the two tables. Besides, even if there were a fracture of the inner table, with depression, is it sure that the probe would detect it? Let us go a step further: supposing we had ascertained that the inner table was fractured and depressed, should we be warranted, in the absence of any pressing symptom, in applying the trephine? Is it certain that a depressed bone, which has for some hours occasioned no symptom of compression, may not continue for some years equally innocuous? Is it certain, that when the symptoms of compression are wanting, the operation of the trepan may not be more pregnant with danger to the patient, than allowing things to remain in *status quo*. Take the case of the Irishman: would a man have been justified, the morning after the accident, in stopping him on his way to his work, taking him to an hospital, and proceeding to remove the detached bone; or, would he have been justified in the second case, where the symptoms of concussion are more severe and continued for a longer time, and after having discovered the incision through the outer table, but failing to obtain any other indication than presumption that the inner table had given way—would he, I say, have been warranted in applying the trephine?

CONTRIBUTIONS TO ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.

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The Cervical Ribs in Man: a Memoir.

A variety in the number of the ribs in man attracted very early the attention of anatomists. M. Hainauld, in 1740, submitted to the French Academy of Sciences some researches on this point: his memoir, entitled, "Recherches sur les causes de la structure singulière qu'on rencontre quelquefois dans differentes parties du corps humain," is a remarkably philosophic production for the period. In that memoir he describes and gives drawings of three anatomical preparations, which he speaks of as being in his possession. I shall first allude to these three preparations, as being each remarkable either in itself, or for M. Hainauld's remarks regarding it: this will lead me naturally to those inquiries I have myself made during the last quarter of a century into the same subject, and which for seventeen years at least I have annually detailed at con-

siderable length in my anatomical lectures; and, finally, I shall make a few remarks as to how far, and how fully, the laws of transcendental anatomy explain the varieties in question.

The vertebræ which, in man, carry distinct ribs are twelve in number; they are called dorsal, and their distinguishing character is chiefly, but not solely, that they carry ribs. They have other distinct characters, no doubt, but this is the chief one; it gives rise to the presence of facets, or articular surfaces, on these vertebræ, which are wanting on the others, for this very reason, no doubt, that in man these other vertebræ do not carry ribs, and were never intended to do so. These vertebræ, perhaps, might have been more appropriately called *costal* and thoracic, as carrying ribs; but this name is also open to objections. The vertebræ superior to these twelve dorsal are always called cervical; whilst vertebræ of three regions, if not four, follow them; these, of course, are the lumbar, sacral, and coccygeal. Similar arrangements hold in all mammals, with one exception, to be afterwards considered; but in mammals merely, for it was soon discovered that in other animals distinct ribs were carried on other vertebræ than the dorsal. In birds these are obvious on certain of the cervical vertebræ, and rather than change the name of the vertebræ, anatomists preferred changing that of the ribs; so they called these ribs on the cervical vertebræ, cervical ribs. Other animals lower in the scale were found to carry ribs on other vertebræ, as on the lumbar. In man himself it was found that occasionally a rib might be found on one of the vertebræ (but only on one) called cervical. And finally, the doctrines of transcendental anatomy prevailed, assigning to all the vertebræ of the human embryo the elements of ribs—rudimentary ribs, if I may so say, which, according to circumstances, may or may not be developed. This latter assertion is, of course, a mere theory, unsupported by direct or intuitive inspection, resting, however, on strong analogies, and supported by the history of the human embryo, and by the great doctrine of unity of formation.

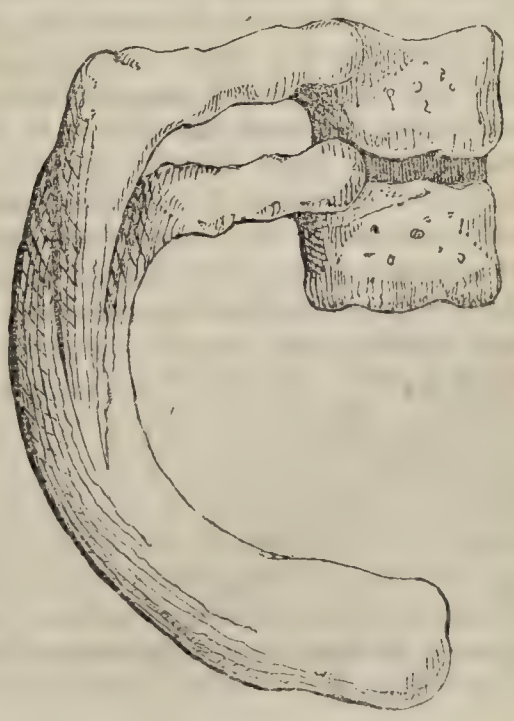
Throughout this memoir the object is to inquire into, and if possible explain, varieties and exceptions to the "laws of species." The law of species (individuality) gives to man twenty-four ribs, that is, twelve on either side: the transcendental law, or of unity and general formations, adds two more; I mean free and distinct ribs, for in regard to others which are now found running into the adjoining processes, as the sacral, there cannot, I think, be much doubt in regard to them. But here let me first state, that M. Meckel's theory that *the ribs* (thoracic) are merely the prolonged anterior roots of the transverse processes of the dorsal vertebræ, is contradicted by the plainest facts.

What, then, are the leading points to which I beg leave to direct the reader's attention? They are, first, the occasional presence of cervical ribs in man; secondly, their presence in mammals; thirdly, the application of the laws of transcendentalism as applied to explain these varieties.

It is a singular circumstance that M. Hainauld, with whom probably originated these inquiries, did himself observe nearly all the more striking forms which the cervical rib may assume in man; and he had the good fortune to stumble on one form which, so far as I know, has never again been observed since his time. Here are his observations in his own words:—

"I have the skeleton of an adult, in which the first rib on each side, well-formed posteriorly, and articulated with the first dorsal vertebra, unites itself with, and becomes confounded with, the second rib, which, by this union, becomes larger than it usually is."

Fig. 1.



"In looking at this skeleton in profile, or in front, twenty-two ribs only are seen. Morgagni, Fantonus, in his Commentary on the Epitome of Vesalius, speaks of the confusion, or uniting, of the ribs similar to the above.

"I have the skeleton of a fœtus about seven months *in utero*. On the left side, the five superior ribs are united posteriorly to each other, but are separated or distinct anteriorly. The sixth and seventh are also somewhat united to each other. These, then, are examples of a seeming deficiency of ribs: and besides, it is not surprising that one or more ribs may not be developed.

Now, admitting freely the possible, even probable correctness of M. Hainauld's explanation of the specimen from which fig. 1 was taken, (see Mem. de l'Acad. des Sc. 1740), a very different view might be taken of this matter. The following figure, drawn from a specimen now before me, will require first to be attentively considered by the reader.

Fig. 2.

Hainauld's figure is coarsely and very imperfectly drawn, so that it is impossible to decide positively regarding it; but I feel disposed to consider it as analogous to the one I have given. Now the rib which he considers to have been the first, or true rib, I believe to have been merely the cervical rib carried occasionally on the last cervical vertebra. His assertion that it was carried on the first dorsal vertebra cannot altogether be depended on, as I shall afterwards show; whilst the reader will be pleased to observe the process on the inner margin of the first true sternal rib, to which the anterior scalenus muscle is attached, and which seems to be formed, when present (for it is far from being always so) by the ossification and union of the cartilaginous termination of the cervical rib: this curious fact I shall endeavour to explain more fully afterwards. The descriptive anatomist, when he speaks of it as being placed there for the attachment of the scalenus, merely shows that he is wholly unacquainted with its nature.

It must be admitted, however, that I know nothing of the history of the preparation, and so far, therefore, is my explanation open to objections: but not so the real nature of the process on the inner margin of the rib, whose history I shall fully explain before the close of the memoir.

Before proceeding to M. Hainauld's next observation, I may as well give figures of the preparations in my possession analogous to the two already described.

Fig. 3.

This is a fore-shortened view of fig. 2: it tends to confirm my explanation of the preparation.

Fig. 4.

The extraordinary size of the process on the inner margin of the first rib is, in this preparation, quite remarkable. Nothing is known of the history of the specimen, but, from its appearance, I feel disposed to conjecture that the tendon of the scalenus may have been ossified, and that therefore the preparation does not illustrate the history of the process in question.

Fig. 5.

Although the preparation from which this figure was taken was dissected, as it were, before me, I failed in obtaining the requisite details: I give them, therefore, in a note, as incomplete, and not quite worthy of being altogether depended on: its history, however, may happily be illustrated by some future observer*.

I return now to M. Hainauld's next observation; he had the merit of discovering the nucleus of bone anterior to the transverse process of the 7th cervical vertebra, so frequently present, so varied in its form, and which is, in fact, a rudimentary cervical rib under whatever shape it appears. This beautiful observation, superficial readers are apt to ascribe to Beclard.

"But it is not so easy to understand how a small number of persons may have one or two ribs more than the rest of men. If it be said that nature has given to some embryos the germ of one or two ribs, which she has refused to all the others, one would be entitled to look on almost all singular and monstrous productions as having been so from the beginning (which it would be difficult to be persuaded of). On the other hand, it is not easy to imagine that two children being enclosed within the same womb, one of them shall have been entirely obliterated excepting two ribs merely, left to his brother, and which have placed themselves precisely on the two sides of a vertebra."

"Now here is the mode in which, in my opinion, these supernumerary ribs are formed. I have found, in many subjects, that the ossification of the transverse process of the seventh cervical vertebra happens in a different way from that of the other cervical vertebræ."

"In the young person, the osseous mass which forms the processes of the cervical vertebræ is united to the lateral parts of the same vertebræ by a cartilage which disappears with age. A portion of this mass divides into two sorts of arches, one anterior (Fig. 6, B), the

Fig. 6.

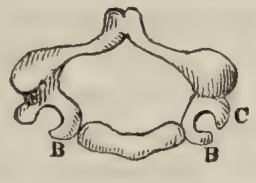
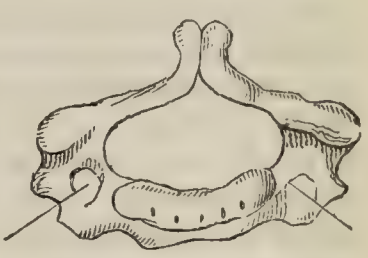


Fig. 7.



other posterior (C), which, as they grow, proceed to meet each other, forming, by their union, the transverse process, and the foramen or hole by which it is pierced.

"Now this is what happens to all the vertebræ of the neck, excepting the 7th. Instead of this anterior arch there may be seen on their vertebra (Fig. 8) in most subjects a particular os-

Fig. 8.

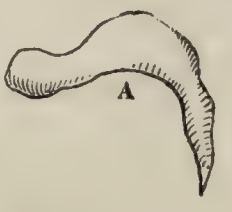
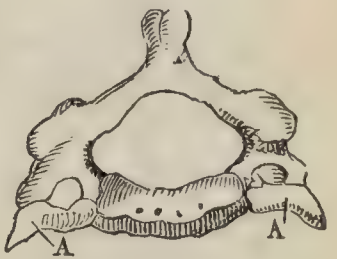


Fig. 9.



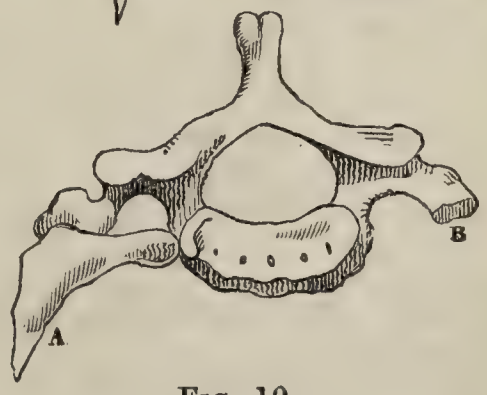


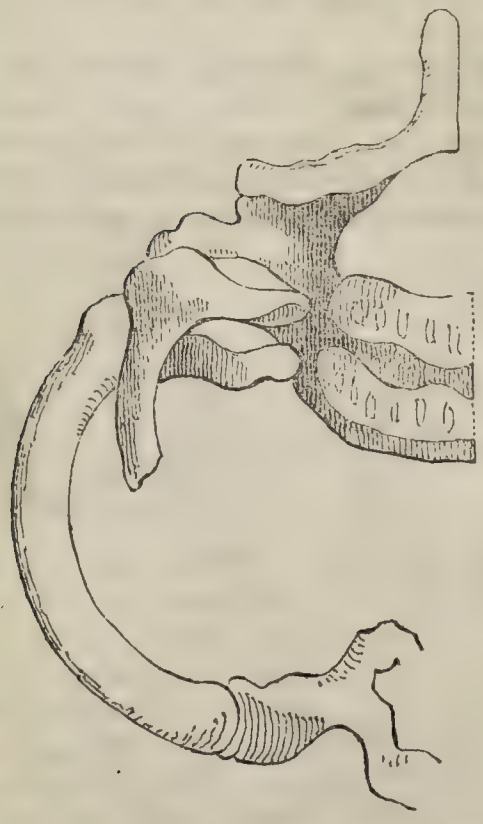
Fig. 10.

seous piece (A) which does not form a part with the rest of the processes, and which is united by a cartilage to the body of the vertebra. This osseous piece is not disposed as an arch; it proceeds straight outwards, horizontally: if it be met and limited in its growth by the posterior arch, it unites with it through the medium of a carti-

* I have again examined the note with every care, and feel that the details cannot be depended on: notwithstanding my urgent request not to do so, the osseous part represented in the figure was hastily cut from its connexions before I had time to examine what they were. For my own part, I believe that the specimen is one in which the cervical rib extended to the *sternum*, but this cannot be positively affirmed. It may be a partial fusion of the first and second thoracic ribs.

lage which unites with it. By uniting with the posterior arch it forms with it a transverse process, similar to those of the other cervical vertebræ, and which, like them, is pierced by a foramen. But if this osseous piece or bone A (piece de traverse) increase rapidly, and is not checked by the posterior arch, it passes beyond it, it extends itself, and assumes the form of a rib: then the posterior arch B has merely the form of a transverse process, similar to those of the dorsal vertebræ. What I mean may be easily understood by examining the preceding figures, or by examining the skeletons of several children who may have lived only a few months, although occasionally the same thing may be met with in those who have lived to the 6th or 7th year. I have skeletons in which the bone I speak of projects beyond the posterior arch only a few lines; others in which it is more extended, as in Figs. 10 & 11;

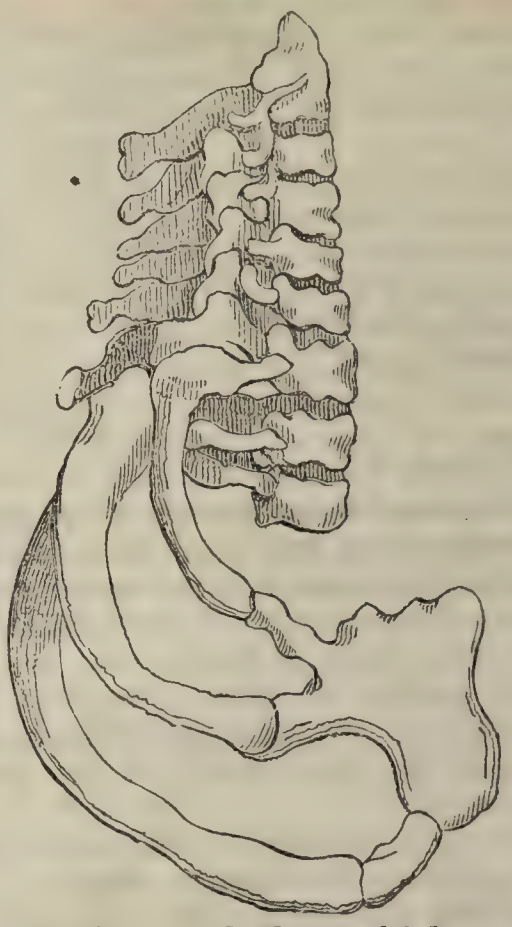
Fig. 11.



and finally others, in which it is wholly formed, as in A.

Thus every man may have 26 ribs, and the two additional ribs will depend on the mode in which the bone I have just described meets the posterior arch of the transverse process of the vertebra. If it extend beyond it, it becomes a rib, and the posterior arch is then formed like the transverse processes of the dorsal vertebræ. This rib being moveable, the cartilage which would have united it with the body of

Fig. 12.



the vertebra, and that which would have united it with the posterior arch, remain flexible. If this bone, however, be restrained by the posterior arch, we have then a transverse process formed, like the transverse processes of the other cervical vertebræ, with a foramen or hole piercing it as in the rest."

I have thrown into a note* M.

* "I may remark incidentally, that when this foramen is met with in the 7th vertebra, I have never seen the vertebral artery pass through it.

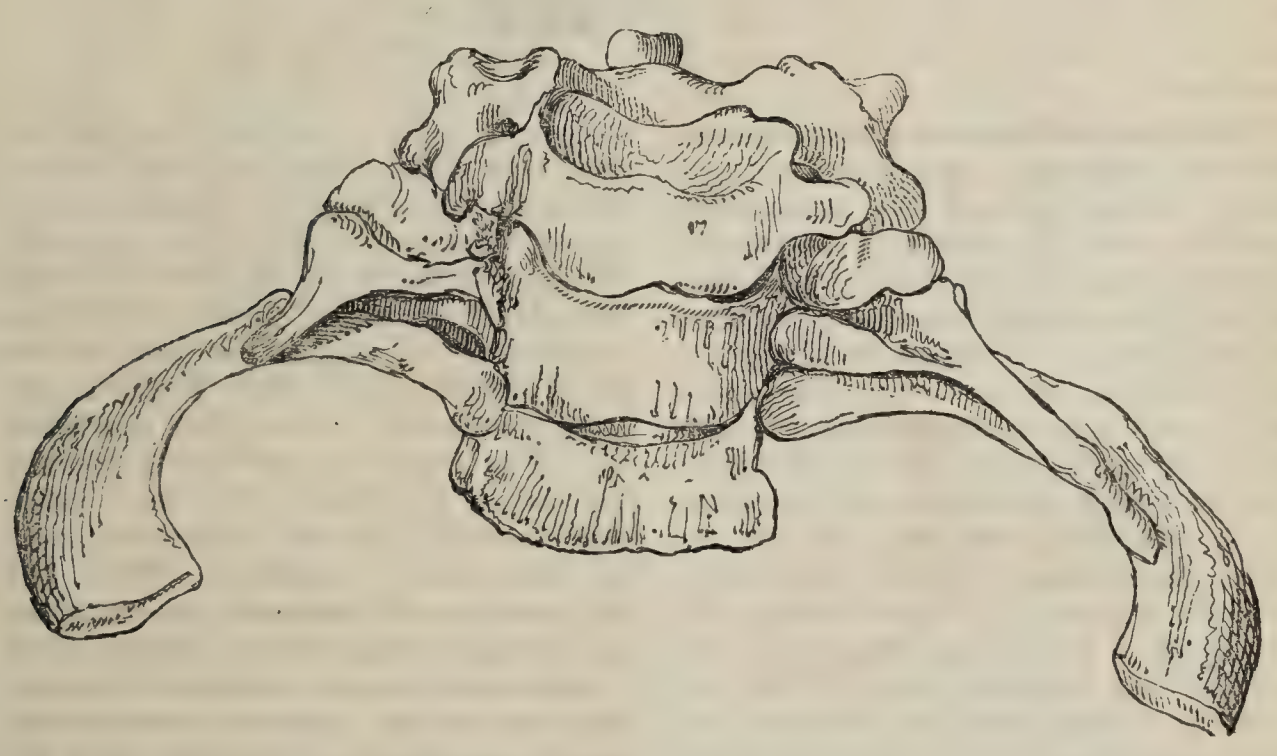
"If the idea I have just proposed be correct, supernumerary vertebræ ought always to belong to the last cervical vertebra, or, if you please, the supernumerary rib ought to be called the first rib; then we shall have 13 dorsal vertebræ, and 6 cervical. This is what we see in those skeletons I have, which possess 26 ribs. The anatomists who have spoken of the supernumerary ribs have neglected to say where they are placed; nevertheless I do not mean to assert that supernumerary ribs may not be found below the other ribs; there may exist a structure unknown to me capable of giving origin to ribs so placed. However this may be, it appears certain that supernumerary ribs, or those above the number 24, can only be the result of a particular development, and that they do not exist as the others in the germ. In fact, it is evident from my quotations from other authors, that there is sometimes a supernumerary rib for each side of the body, and sometimes it is found only on one side; that sometimes in adults, where all the parts which naturally exist have acquired their full extent and complete development, one of these supernumerary ribs may be perfect, and the other imperfect.

"I am well aware that what I have just said does not explain the reason of the form which this rib takes, of the cartilage in which it terminates anteriorly, and of the intercostal muscles, if there be such, between it and the rib which follows: but I do not think that this necessarily destroys my explanation," p. 539.

Hainauld's remaining observations, which are greatly to the point, provising him to have been a most acute observer; and shall now proceed to complete, in as far as I can, the history of the cervical rib in man, which M. Hainauld's observations assuredly do not fully complete. And first I may observe that he is the only person, in so far as I know, who has seen the "cervical rib" extend to the sternum; the preparation might possibly be still found in Paris, but I imagine it to be *unique;* I never saw nor heard of one any where myself. In fact, in such a case, the 7th vertebra is no longer a cervical one in any sense of the term. But be this as it may, it shews clearly the correctness of M. de Blainville's view of this vertebra, namely, that it belongs to a category differing from the preceding cervical; a different *group, in fact*, which, limited to a single vertebra in man, may one day be found more numerous in some other mammals recent or fossil. But I need not dwell on this here, seeing that it falls to be discussed more fully when speaking of the bradypus or sloth.

That M. Hainauld's view of the mode of formation of the cervical rib is not quite correct, is proved, I think, by the following figure drawn from a preparation which has been now described by me in my lectures for at least 17 years—proving a fact which seems to have been

Fig. 13.



unknown from the time of Hainauld to that of Meckel, for the same error is repeated by Meckel in his latest works. I repeat, the actual osseous elements or germs of this 7th vertebra are more numerous in man than these anatomists supposed them to be, as is fully proved by the above figure, so that no more need be said about it. This is a question totally independent of theory, and is decided by direct intuitive inspection. The pedicle or foot-stalk of the transverse process of this vertebra may, and probably always does, comprise the following elements: 1st, a germ for the posterior arch; 2d, one for the anterior; 3d, a short nucleus for the articular surface; 4th, a separate and distinct germ for the rib. Now these different germs may, and, as we know, are, developed in a great variety of ways. Sometimes the rib extends to the sternum, so at least says M. Hainauld; more frequently it stops short, and terminates by a rounded free extremity, or unites with the first true rib, forming that process on the inner edge of the rib so curiously described by the descriptive anatomist: sometimes it is very short and rudimentary, but still distinct from the anterior root of the transverse process; at other times so intimately united with it that there is no distinguishing between them. Lastly, the rib may be wanting altogether, and so may the anterior root of the process; or this latter may be wanting, and then the rib seems to take its place by completing the foramen: it was this that misled Hainauld.

In this preparation (which I shall

describe more carefully afterwards) there are two supernumerary ribs, one on each side, but irregularly developed.

With a view to render the history of the cervical rib as complete as I can, I beg leave to subjoin figures and descriptions of the following preparations:—

Fig. 14.

The whole of the cervical vertebræ, and five superior dorsal vertebræ, in a young person (about five years old), together with the first true or sterno-vertebral ribs. The transverse processes for the 7th cervical vertebræ have been shaded deeply, in order to bring out the following facts. 1st. The great length and irregular form and breadth of both, and their widely different character from the transverse processes of the preceding vertebræ. 2d. On the right transverse process, anteriorly, there is evidently a rudimentary rib, resting on a projecting process of the body of the vertebra: behind this rib there is a large vertebral foramen or hole, through which, in all probability, there passed merely the vertebral vein and a branch of the sympathetic nerve: behind this is the posterior root of the transverse process. 3d. On the other side, or connected with the left transverse process of the same vertebra, there is, first, a distinct rib, separated from the anterior root of the transverse process by an evident fissure: behind this fissure we find the anterior root of the process; and behind this the usual foramen for the vein, shut in posteriorly by the posterior root of the transverse process. The reader's attention is particularly requested to this fact; it refutes Meekel, Hainauld, and all their followers; thus leaving no doubt as to the nature of the structures, and disproving, in respect to the spurious or cervical ribs, what I had long ago done in regard to the true ribs, that even they were not merely the anterior roots of the transverse processes—a theory which, if not originally brought forward by Meckel, at least was chiefly supported by that laborous anatomist. It ought, perhaps, to be further mentioned, that these transverse processes I have just described do not resemble any of the preceding transverse processes: they have more the character of the same processes in the dorsal vertebræ. Were the rudimentary rib removed, for example, on the right side, we should then have a transverse process without a foramen, with a strong blunted termination turned somewhat backwards, as in the dorsal vertebræ, and a small projecting process (the part supporting the head of the cervical rib) anteriorly, arising from the body of the vertebræ, and resembling, were it prolonged, the anterior roots of the transverse processes higher up; so that the anterior roots of the transverse processes of the cervical vertebræ generally seem to me to be formed of these parts—1st, by the facets, which, lower down, support the heads of the ribs; and 2dly, by the delicate nucleus, or germ, which, at first cartilaginous and afterwards osseous, stretches outwards to form the anterior margin of the foramen for the artery, and united by its extremity with that of the posterior root. The left transverse process resembles, when examined from behind, one of the dorsal,

but besides this it has a foramen for the vertebral vein, and an anterior root, perfectly distinct from the head and neck of the rudimentary rib laying in front of it. To this curious fact, the resemblance of the transverse processes of the seventh cervical vertebra in man to the dorsal processes, I here beg leave to call the attention of anatomists, and shall, in a future part of the memoir, again call the attention of the reader to it.

Fig. 15.

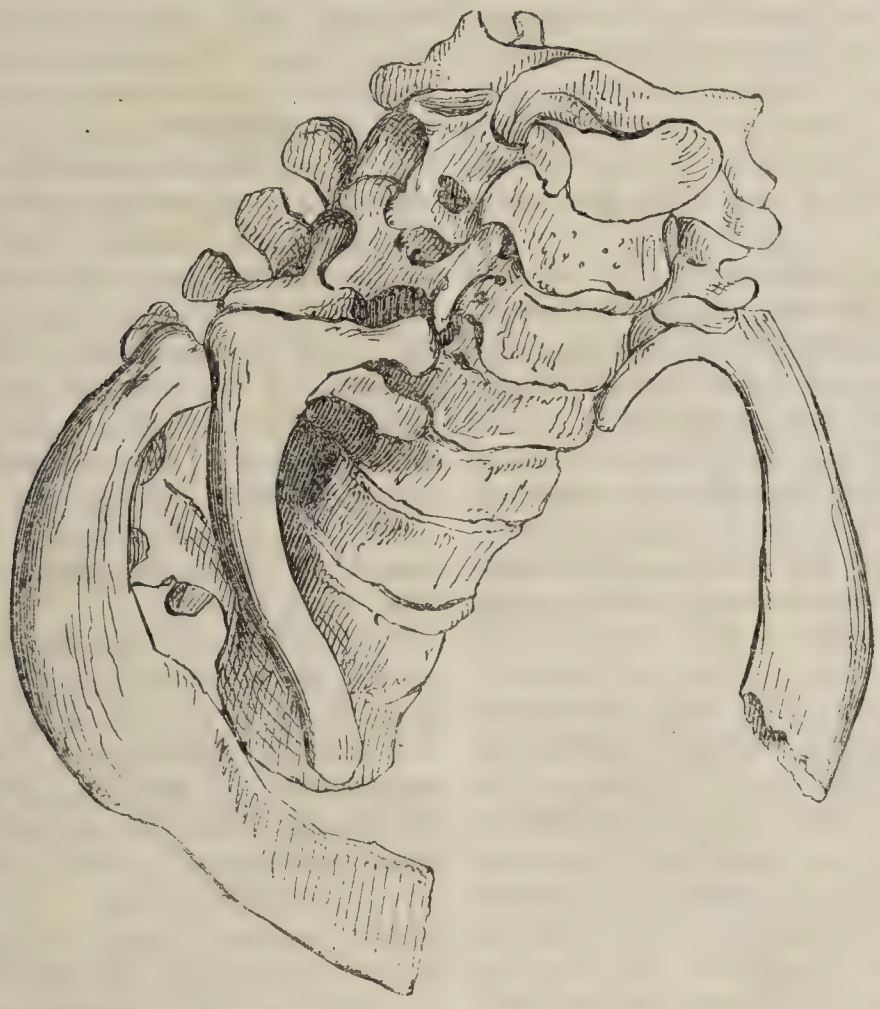
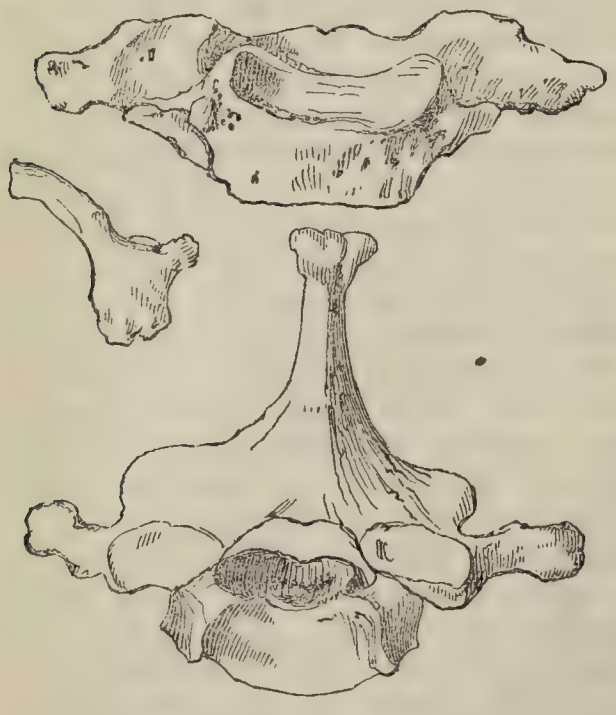


Fig. 16.

These figures represent a very interesting case of the presence of a rudimentary or cervical rib on the right side; also the first, or true thoracic ribs, seen from above; and give a view of the two lowermost cervical vertebræ, and first and second dorsal seen from the right and left sides. As the figures speak for themselves, I shall only mention in detail a few particulars regarding the last cervical vertebra, and conclude by giving a history of the dissection of the soft parts, which, very fortunately, I had an opportunity of observing.

It is on the right side that we find the cervical rib was carried: there is no foramen, properly speaking; the transverse process is unlike the cervical, and is rounded, and slopes back nearly as much (but not quite) as the same process in the first dorsal vertebra. There is a most distinct articular facet on the body of the bone, and a half facet upon its inferior edge; and, lastly, it carried the cervical rib.

Fig. 18.



The ascending extremities, vertical processes of the body (still more remarkable as we proceed higher) of this vertebra, by means of which the bodies are, as it were, locked into each other, is more distinct than what we find upon the first dorsal, wherein this peculiarity in the form of the bodies has all but disappeared. I had almost forgot to mention, that on the right side the transverse process has a distinct articular surface for the tubercle of the rib.

On the left side of the same vertebra, the view is entirely different, so that, were the bone sawn vertically, dividing it into two equal parts, no one would ever imagine that the two halves belonged to the same bone. First, in respect to length, the transverse process equals that of the right side, but it is neither so regularly formed, nor so strong; moreover, it has nearly all the characters of a cervical vertebra in this respect: there is a large foramen for the passage of the vein, a deep groove, &c.; and if the germ of a cervical rib did ever exist, it must have disappeared in the very earliest condition of the fœtus, and uniting, by bony union, with the anterior process, has left scarcely a trace of its existence. 2dly, The direction of the process differs from that of the sixth cervical, and of the first dorsal—that of the latter being backwards, that of the former slightly forwards. In its direction, the process I speak of is intermediate to these, or directly outwards.

The history of the dissection of the above case, as transcribed from my note-book, is as follows:—

"During the dissection of a young woman (about 27 years of age) a peculiarity was observed on the right side, where it was evident that there exists a supernumerary rib. The sacro-lumbalis sends a tendon to its tubercle; also the longissimus dorsi, the trachelo mastoideus, and transversalis colli. The scalenus posticus is as large as the medius, and is attached to the first thoracic, or true rib, by a broad surface of about three quarters of an inch in breadth. On removing this superficial portion, a second was found, attached in a similar fashion to the cervical or supernumerary rib. The arteria transversalis colli passed through between the scalenus medius and posticus, over the top of the cervical rib, about an inch from its tubercles. A distinct intercostal muscle occupied the space between the cervical rib and first or true thoracic rib, and the other, or sternal end of the former, was connected or bound to the cartilage of the latter by a strong ligamentous cord. The subclavian artery and first dorsal nerve ran over the upper surface of the cervical rib, and, as usual, between the scaleni muscles. The subclavian vein ran across that tendon or ligament which connected the cervical rib to the cartilage of the true rib. The scalenus

anticus was attached, 1st, to the cervical rib near its extremity; and 2dly, to the first or thoracic rib by means of the tendinous or ligamentous cord already described. The vertebral arteries entered the foramina in the bone of the transverse processes of the sixth cervical vertebræ on both sides." The preceding rough sketch, Fig. 17, also taken from my note-book, may be of use in aiding the above brief description. The subclavian intercostal artery was small; the first aortic intercostal supplied the first normal intercostal space; it anastomosed with the subclavian intercostal.

In fig. 18 I have represented the cervical vertebra in an adult skeleton. Of this preparation, and of the one which follows, I shall speak more particularly in the supplement; the supernumerary ribs were, in this case, two in number, one on each side, nearly symmetrical; the vertebra which carried them strongly resembled a dorsal vertebra.

Fig. 19.

This, also, is taken from the adult, and forms a contrast to the preceding preparation. On each side of the seventh cervical vertebra there is a pretty large supernumerary rib, but quite irregular, and united by bony union to the anterior root of the transverse process of the seventh vertebra. There are two foramina on one side, and one on the other. All the osseous tissue is to be understood to be quite healthy, excepting in those cases where the contrary is expressed.

[To be continued.]

MR. LEE
ON
BELGIAN MEDICAL INSTITUTIONS.

Colony of Insane at Gheel.

Antwerp possesses a handsome military hospital, and the civil hospital St. Elizabeth, which, like most others in Belgium, is an ancient edifice, formerly a convent, the chapel of which now forms the principal ward, the other wards being low and indifferently ventilated. The number of beds is about 350. Two physicians and a chief surgeon perform the medical duties. Among the cases at the period of my visit, there were none that seemed to me particularly worth noting.

In my last, I alluded to the exclusive treatment of the insane by moral means: this is carried out on a large, though somewhat rude scale, at Gheel, a village some leagues from Antwerp, where numbers of the insane are placed, to lodge with, and to share the labours of, the inhabitants. As this colony has not been heard of by the great majority of the profession in England, some details respecting it may not be unacceptable, for which, as I have not myself visited the place, I must be indebted to a *brochure* lately published by Dr. Moreau, physician to the Hospice of Bicetre, who kindly sent me a copy of it from Paris.

Gheel is situated in an extensive district of Belgium known by the name of the *Campine*, the plains of which are uncultivated, covered with brushwood and fir trees, except in the immediate neighbourhood of the towns and villages, where the land is in a high state of cultivation. The Campine has been termed the Siberia of Belgium.

Gheel is in the centre of this tract of country, isolated, separated from other habitations by an extent of several miles of waste land, which greatly facilitates the superintendence of the patients, inasmuch as, from the difficulty of progressing through the bush-wood, those who attempt to escape must follow the high road, on which they are easily recognized and stopped. At Gheel, the insane, who were formerly treated elsewhere in so barbarous a manner, have, during several centuries, lived almost free in the families of the inhabitants, under the patronage of the saint by whose means they expected to be cured, traditions agreeing in ascribing the origin of the colony to the martyrdom of the daughter of a king of Ireland, who sought refuge in the neighbourhood of Gheel, at the close of the sixth century, to escape the persecution of her father, and who, after her death, was canonized. For a long period there was no other physician in the colony; and, nevertheless, the prayers of the families were sometimes

heard, and cures were effected. In those times of ardent faith, religious practices were calculated to exert an immense influence over the mind of the patient. At the present day, however, recourse is had to Saint Dymphne in order to obtain a patient's cure, in those cases only when a wish to that effect is formally expressed by his family.

The reputation of Gheel as regards the cure of insanity has always stood high, and the miracles operated in their favour by means of the intercession of the Saint, attracted patients from all the surrounding countries. The colony, however, has only been well known since the eighteenth century, at which period it was visited by distinguished men from other countries, among whom was the worthy successor of Pinel, Esquirol, whose principles, as exposed in his *Traité des Maladies Mentales*, were doubtless partly derived from his inspection of Gheel. An asylum, says this distinguished physician, ought to resemble as much as possible, by the disposition of its localities, ordinary habitations. All that savours of constraint or mistrust, all that might excite in patients the thought that they are for ever separated from society, ought to disappear. The classification of the patients according to the nature of the alienation is one of the most important conditions of the treatment. Hence the necessity of numerous divisions, which admit of the avoidance of confusion. The colony at Gheel is but the realisation of these principles, the essential basis of all treatment; and there, as is always the case, facts have preceded theory; chance has gone before the discoveries of science.

In 1803, M. de Pontecoulaut, the prefect of the Dyle, who was doubtless struck with the immense advantages which the colony presented for the placement of the insane, thought, as he expressed himself, that he fulfilled a duty towards humanity in adopting, with reference to these unfortunates, a refuge recommended by the success of long experience. He consequently caused all the insane in the hospitals at Brussels to be sent there; and the example was soon followed by Malines, Louvain, and other towns of a secondary class. When Belgium was united to Holland, in 1815, the eastern provinces and Flanders sent a considerable number of insane to Gheel. Lastly, Namur and Luxembourg made arrangements with the municipality of Gheel for the reception of other patients.

While the colony was making so rapid an increase, its interior organization ought at the same time to have been duly considered, and means should have been taken to regularise so great a number of individuals. Unfortunately it was not so; Gheel was only a depôt—a sort of Botany Bay—to which Belgium sent those patients who, after having been treated for a few weeks in one hospital or another, were reputed incurable. They were there forgotten; and those only left the place who, being restored to health, and conscious of their cure, were permitted to return into society.

"It is very true, as stated in the report made to the Communal Council of Gheel, on the 19th November, 1838, that this state of matters has, at all times, awakened the solicitude of the magistrates of the commune; but most of the police regulations were out of date, and had fallen into disuse. Serious abuses had crept in; the direction of more than 700 insane was, so to speak, committed to chance. The same neglect occurred with reference to the administrative and medical departments: the insane were placed in the colony, and quitted it cured without the knowledge of the authorities; no account was given of the patients by their families; methodical treatment had become impossible; the colony was a vast field of observation, uncultivated and useless to science."

The censures expressed in the public papers, by foreign and Belgian medical visitors, caused the institution to fall into a well-merited disrepute, and even compromised its existence: a serious and radical reform had then become indispensable; and the Council consequently adopted, in 1838, a police regulation of administration and superintendence, upon the basis of a medical direction.

There are no less than 9000 inhabitants in the commune of Gheel, a large portion of whom reside in hamlets at a greater or less distance from the central village. The insane (men and women, the number of which is about equal) are distributed over all the parts of the district. All the inhabitants, whatever be their position or avocation, may

receive patients into their houses, according to agreements made with their families, or from the hospitals of Brussels, Malines, &c. Most of the patients are supported at the expense of the government. The price required for board and lodging varies according to the accommodation. It seldom exceeds 300 florins annually, or is lower than 100. Each patient is placed under the direct superintendence of the person to whom he is confided; this individual (*nouricier*) must supply the patient with wholesome and abundant food, a clean and well-aired lodging, a good bed, &c.

No insane person can be placed at Gheel without being provided with a preliminary authorization of sequestration.

Monomaniacs, with an evident tendency to homicide, or to incendiarism, are not received at Gheel.

All the insane are inscribed upon a register on their arrival, together with such details and peculiarities of their case as could be obtained. In such an establishment the superintendence must be active, unceasing, prompt in chastising offenders, and in encouraging good actions. It must have an eye, day and night, upon the patient and the person to whom he is confided. Doubtless this superintendence cannot be so easy in a colony as in an asylum; but being shared by a sufficient number of individuals, and developed in its means of action, it will be able, without difficulty, to repress abuses, to protect each member of the colony against the neglect or ill-treatment of his host, no less efficiently than in establishments where the patients are trusted to *infirmiers*. There is no patient at Gheel who has not a commission of superintendence, or a director, to watch over him. The general superintendence is vested in the local administration. The hospices, towns, parishes, or private individuals, who place patients at Gheel, may appoint special commissions of superintendence, or may nominate individuals for the purpose, at their own choice and expense: these special superintendents are, however, under the control of the College of Burgomasters.

The different members of the commissions are charged to visit the patients frequently, and without previous notice: the entrance of each house is at all times open to them. They see the patient, inspect his room, his bed, receive his complaints; in a word, obtain all the information which may conduce to ameliorate his position. If the host is in fault, the patient is removed and placed with another. Should he have struck or ill-treated his patient, unless he can prove that it was done in his personal defence, he is declared *infamous*, and unfitted to receive any more lodgers. The insane share the labours and the daily occupations of the families in which they reside. Some even contract such a liking to the mode of life that they voluntarily remain after having recovered their reason. The majority walk about the village and in the environs, with almost as much freedom as the other inhabitants; but in accordance with the regulations, they cannot go out before six in the morning in summer, and eight in winter: they must return home at four in the afternoon in winter, and at eight in summer. Each *nouricier* is bound to enforce this regulation under the penalty of a fine. Those individuals, however, who are known to labour under a harmless kind of alienation, and whose conduct is peaceful, are exempted from the strictness of this law; but in no case are they allowed to be out at night. Each patient going to church is accompanied by a member of the family.

With the exception of these restrictions, the patients enjoy all the advantages of society, of which they are even useful members. In fact, the colony supplies hands for agriculture, for various industrial pursuits and professions, while, at the same time, the mind of the patient is diverted and occupied, which cannot fail to contribute powerfully to their restoration. There are at Gheel not merely workmen of all kinds, but even teachers of languages, of arithmetic, drawing, and writing. There is a harmonic society, which was founded by one of the patients. "I assisted," says Dr. Moreau, "one evening at a vocal and instrumental concert, and was struck with the precision and the unity of the execution."

The entrance to the smoking houses is not prohibited to the patients; and it is not uncommon to see them there quietly smoking their pipe, with a pot of beer at their side; or playing at

cards, billiards, or some other game. Abuses are prevented by fining the inn-keeper in whose house a patient may have become intoxicated.

"Although," continues Dr. Moreau, "I have had much practice with the insane, and have, since 1827, lived almost constantly among them; although I cannot forget that, every day, at Charenton, thirty or forty patients, of both sexes, meet in a public room, where music and different games procure them agreeable diversions, yet I confess I was surprised to see them at Gheel, walking about freely in the streets of a large village, and in the country, mixed with the inhabitants. I was especially surprised at the little notice which they attracted even from the children, whose attention is not excited by the extravagances of some of the patients at Gheel: one is born, so to speak, a superintendent of patients. It is *traditionally*—by the experience of predecessors—that the wants of the insane are known; the art of ruling them, which is so difficult, the Gheelois possess, in great measure, without being aware of it; because it forms part of the habits of their lives. The great liberty which the insane enjoy at Gheel cannot then be attended with much inconvenience, since, after all, they are constantly watched by numerous and intelligent keepers.

In our hospices, high walls, a strict superintendence, keepers placed at the entrance of each division, are not always sufficient to prevent evasion. With what perseverence do not almost all the inmates ask for their liberty! how greatly do they not torment and agitate themselves in order to regain it! Hence it is natural to suppose that the number of those who escape from Gheel would be large; and yet it is only, on an average, seven or eight annually, out of more than seven hundred individuals. This number is so small that it might be supposed incorrect if the statistical returns for several years did not confirm its truth. On considering, however, the disposition of the insane, there is nothing to occasion much surprise as regards this point: the patients at Gheel perceive that they enjoy almost as much liberty as the inhabitants whose employment they share. Whatever be the ideas they may entertain as to the causes which brought them to the place, the idea of a prison — of forcible detention — does not arise in their minds so easily as when they are shut up in the court-yard or sleeping-wards of an hospice, together with other individuals subjected to the same regimen and to a uniform mode of life. The privation of liberty being scarcely felt, they do not think of forcibly obtaining a good which appears to be at their disposal. Precautions are, nevertheless, taken against escape. If a patient manifests a fixed resolution to run away, or has already made the attempt, he is not on that account constantly confined in a room; but a rather heavy chain, the ring of which is covered with leather, is fixed to his leg, so that he still enjoys considerable liberty in walking about.

Those patients who exhibit a disposition to suicide, and epileptics, are subjected to a special superintendence. Suicide is rare in the colony, which is more to be attributed to the mode of life, the continual occupation, and the degree of freedom enjoyed, than to the direct superintendence. One patient killed himself in 1840, and one in 1841.

Those patients who are violent and dangerous are placed out of the way of others; but these cases are rare in the colony; the reason of which is to be found in the liberty which they still enjoy, notwithstanding their state of excitement, and which the nature of the locality admits of. It is now known that the best means of calming the agitation, the fury, of a maniacal patient is to allow him, as much as possible, freedom of action. This agitation, this fury, inevitably increases in proportion to the efforts which are made to repress it, and ultimately terminates in incurable stupidity. When, however, a patient is unmanageable, the *camisole*, or even chains, are allowed to be made use of at Gheel, upon the representation of the physician to the administration that these means are requisite.

[To be continued.]

ACUTE PERITONITIS.

To the Editor of the Medical Gazette.

Sir,

The subjoined case of acute peritonitis, induced by the reception of several blows upon the back, is not devoid of interest: the length of time which elapsed between the infliction of the

violence and the supervention of inflammatory symptoms, coupled with the situation of the pain in the abdomen, inclines me to the opinion that partial laceration of the longitudinal ligament of the liver was the immediate consequence of the strokes: but to trace the relation of cause and effect I leave to those philosophic minds under whose consideration this report will fall, should it be deemed worthy a place in your valuable journal.—I am, sir,

Your obedient servant,

J. W. WAINWRIGHT, M.D.

Manchester, Oct. 16, 1843.

Mrs. G——, æt. 36, of plethoric habit of body, states that on Friday, Sept. 29th, whilst sitting on a low chair, she received three or four severe blows from a person's fist, which prostrated her on the floor. Was not deprived of consciousness, but was immediately distressed by violent retching; some tea, of which she then partook, was at once rejected. No marks of discoloration perceptible on the back, though the pain was dreadfully harassing; urine passed without inconvenience.

On the 4th of October, on the recommendation of her medical adviser, leeches, to be followed by warm fomentations, were had recourse to: the pain extending round the abdomen, with incessant vomiting, induced the medical gentleman to prescribe calomel and opium, with effervescing salines. The vomiting, however, continued unabated till the 7th, when it was fortunately relieved by the exhibition of prussic acid.

At this period she began to complain of acute pain and tenderness about the junction of the epigastric and right hypochondriac regions, to relieve which leeches were applied with success.

On the 8th Oct. in conjunction with her medical attendant, the case first came under my observation. On entering the room, we found the patient propped up in bed; knees semiflexed; face pallid, with intense anxiety depicted on her features. Skin dry and harsh; pulse 140, small and compressible; tongue slightly furred, with dusky-red edges; thirst much complained of; intolerable pain over the thin margin of the liver, with inability to bear the least pressure over any part of the abdomen; respiration quick and hurried, performed entirely by the thoracic muscles; sickness has not returned since the administration of the hydrocyanic acid. Urine high-coloured; stools dark and watery.

A large number of leeches were ordered; calomel and opium every second hour; with draughts of prussic acid to allay the irritability of the stomach.

9th.—Patient lying in the same position as yesterday; face much flushed; features expressive of intense suffering; has had no sleep from the acuteness of the pain, which has shifted into the right iliac region; more leeches had in the night been applied to this spot without alleviation; pain more intense over the whole abdominal cavity, which is tympanitic; tongue covered with a dry, brown fur; still complains much of thirst, for which she prefers weak tea to any other beverage. Bowels unmoved during the last 24 hours. Urine scanty, high coloured, with deposit of a copious sediment. Pulse 140, small, and weak; respiration performed with fear, as it augments the pain; no sickness since last report; skin dry.

Venæsectio ad ℥xij.; six grains of Calomel, and Pulv. opii. gr. iij. to be taken immediately. A purgative enema exhibited, and a powder of Hydrarg. chlorid. gr. j., Pulv. Scammon, gr. iv., to be taken every second hour.

In the evening, patient more composed, countenance indicative of less pain; position now horizontal; has been much easier since the bleeding; pain in iliac region mitigated, still unable to bear the slightest pressure; tongue moist; blood buffed, and very much cupped. Pulse 90, soft, and full.

V.S. iterum ad ℥xvj. continuentur Pulveres. Mistura Purgans vice Mistur Acidi Hydrocyanici. Expl. cantharidis lateri applicandum.

10th.—Looks better; more free from pain; has passed a comfortable night; skin moist, perfectly easy, unless pressure be made over the abdomen; tongue tolerably clean; thirst still urgent; has vomited once; three copious bilious dejections have been passed; pulse 90, soft, but firm. Respiration natural; can take a deep inspiration with little inconvenience. Blood as much buffed and cupped as the former.

Continuentur Pulveres, et habeat Magnes. Sulphat. ℥iij. in aqua Menthæ pip. cum singulo pulvere.

In the evening the patient still improving, her only complaint being of excessive thirst; pulse 120, irritable.

Ordered an opiate.

11th.—Passed a comfortable night; no pain; pulse 86, full; bowels thrice relieved.

Omitte Pulveres.

Mouth not perceptibly affected by the mercury.

12th.—Recovery proceeding rapidly: complains of exhaustion from a diarrhœa which set in at 3 A.M., up to which time she had enjoyed sound sleep, without the aid of a sedative. Alvine dejections watery, and bilious. Pulse 84.

Broth or farinaceous food recommended. To take a mixture of the aromatic confection, with a few drops of laudanum in each dose.

From this time her recovery was uninterrupted, without the supervention of a single unfavourable symptom.

MATICO.

To the Editor of the Medical Gazette.

SIR,

DR. R. W. SCOTT has, in your last number, shewn a filial-like jealousy about Dr. Jeffreys' share in the merit (?) of introducing the matico into practice. In his extraordinary desire to manifest this jealousy, he has created a shadow merely for the purpose of displaying his quixotism.

He complains of my having omitted, in my notes on the matico, all mention of Dr. Jeffreys, and says that "it might be inferred from Dr. Lane's communication that *he* was the first to make trial of its internal use;" and then proceeds to insinuate that I was indebted to Dr. Jeffreys for the matico which I employed; next, that I was aware it had been previously used internally; and lastly, that I have been filching from Dr. Jeffreys' "fair fame" as the introducer of this plant.

As I knew nothing of Dr. Jeffreys' labours in connection with the matico, except as a person who had interested himself in its importation and employment, certainly not as a physician who had ever had the opportunity of testing its internal medicinal action, I saw no reason for introducing his name any more than that of the druggist supplying the article to the hospital.

What was assigned as the motive of my trying the virtues of this plant may here be repeated as true at the present moment:—"I am not aware of their (the leaves) medicinal action when internally administered having been ascertained;" and it may be added, nor am I aware, except from Dr. R. W. Scott's annunciation, of its having been essayed in this country. Yet, excepting the Edinburgh Medical and Surgical Journal, I regularly see, at their respective periods of publication, all the accepted standard and esteemed medical journals. The Transactions of the Provincial Medical Association, however, not being included in this catalogue, may explain and show that it is *not* "rather singular that Dr. Lane should state that he was not aware that it had hitherto been employed internally." If Dr. Jeffreys choose to bury his productions, he must not expect others to exhume them merely for their coffin plate.

The only notices that I have been able to find of this plant in any of the English medical journals were two—the brief announcement of its existence (for it cannot be called a description), its styptic property, and a promise to try its reputed diuretic action, published by Dr. Jeffreys*; and Dr. Monro's† account of his experiments regarding its stypticity. Wherefore, so far as English medical records go to prove a priority of its internal administration, they would favour my claim were I to affect to institute one. I should not commit such a folly. The plant has, as is stated in my notes, long been internally administered and externally applied by the Peruvians. Where, then, the merit in doing that which has elsewhere so often been done before? My object was "to give the plant that honest and impartial trial which its Peruvian reputation would seem to invite and justify." This I have been realizing, ignorant of the labours of any others in the same inquiry. To me priority of discovery of such a comparative trifle is unimportant. If Dr. R. W. Scott think that his client, Dr. Jeffreys, can derive

* Lancet, vol. i. 1829, p. 567.
† Prov. Med. and Surg. Journ. June 18, 1842.

from his exertions on behalf of the importation and employment of the matico a hope of the glimpse of professional immortality, he is most welcome to the merit of priority, as I can better afford to spare than he to lose the advantages of such a chance.

Mr. R. Hinde, of this town, about four years ago, first made me acquainted with the matico. He had seen it used by the Peruvians, and was very anxious to have its properties known in this country. In giving me a specimen, sadly too small to serve any useful experimental purpose, he spoke in highly laudatory terms of its efficacy as an astringent, &c. when internally or externally used. Being unable to obtain an additional quantity, I was prevented from effectuating his wishes. About the latter months of last year, however, having learned that Dr. Jeffreys was in some way connected with the importation of this plant, I requested Mr. C. Ricketts, the house-surgeon of the hospital, to inquire where it might be obtained. An answer was received, with so much of the herb as could be inclosed in a penny letter, accompanied by a circular advertising the place of sale of the matico. The quantity forwarded was so insignificant, that Dr. R. W. Scott ought to have known, if properly instructed by his client, that it could not have enabled me to have made a single experiment with it. The hospital was afterwards supplied by the druggist advertised in the circular, and subsequently by a highly respectable chemist in this town.

It may be here necessary to remind Dr. R. W. Scott, that in claiming the *priority* of merit, it is always of paramount importance to be accurate in dates. He has in the MEDICAL GAZETTE stated that Dr. Jeffreys had some correspondence with Mr. Ricketts in 1841. In the Medical Times he has been more particular, and specified the month as well as year, viz. October, 1841, as the date of this correspondence. Now, no correspondence on this subject, nor, I believe, any other, took place between these two gentlemen for at least a whole year afterwards!! This is absolutely unimportant, except as a lesson to Dr. R. W. Scott, teaching him that when he next becomes advocate he must see to the correctness of his instructions ere he employs them in public. Dr. Jeffreys, in a month after transmitting his "note" of the matico, wrote for the results of the employment of this medicine, when Mr. Ricketts replied that Dr. Hunter Lane was engaged in trying its efficacy in diseases depending upon relaxation of the secernent capillaries. I saw no reason why I should report to Mr. Jeffreys the result of my experience. I preferred to do it to my professional brethren generally. Because I have done it thus independently, and not under the wing of one who could never constrain my respect, I am accused of attempting to steal the merit of priority in introducing or internally using the matico. Dr. R. W. Scott may be assured, that, if disposed to commit literary or scientific larceny, I should select as my victim one who could afford to lose.—I am, sir,

Your obedient servant,

J. HUNTER LANE.

Lancaster, Oct. 30, 1843.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le ecteurs tue à abréger."—D'ALEMBERT.

Medico-Chirurgical Transactions, published by the Royal Medical and Chirurgical Society of London. 2d. Series. Vol. VIII. Longman and Co. 1843.

THE volume which lies before us contains various interesting and valuable papers, of which we proceed to present our readers with a brief analysis, taking the essays in the same order as we find them.

Case of Paralysis, without loss of Sensation, from Disease of the Cervical Medulla. By JOHN WEBSTER, M.D. Consulting Physician to St. George's and St. James's Dispensary, &c.

IT is gratifying to observe the attention which has of late years been given to the nervous system practically as well as physiologically, and we must say that much of this is owing to the investigations of Sir Charles Bell, followed up as they have been by various others.

We give the essential particulars of Dr. Webster's case in his own words.

In the year 1836, Mr. G——, whose health had hitherto been excellent, was annoyed for some months by a phagedenic ulcer on the left leg, from

which he suffered much pain and inconvenience; and although the sore afterwards got well, a similar ulceration on the leg again broke out in 1838, when it was followed, in the same year, by a large chronic ulcer on the posterior part of the pharynx. It is right, however, to state, that this local affection did not appear to be of a syphilitic character, and the patient, I was assured, never had any complaint of that nature. The ulceration in the throat continued for some time without undergoing much alteration in appearance; until, both from it, and from the sore leg, the patient's constitution was considerably deteriorated; and as Mr. G—— afterwards met with a severe domestic affliction, he also suffered much from mental depression.

Towards the end of autumn in 1839, Mr. G—— again began to suffer materially in health; he now complained of almost constant pains in the head, which occasionally became so severe as even to oblige him to stop in the street, and to lean against the rails for support. These symptoms were also frequently accompanied by sickness and considerable prostration of strength; the bowels being generally costive, the tongue much furred, and the appetite at the same time impaired. In January 1840, slight epileptic attacks now supervened, which were attended with an exceedingly slow pulse, varying generally from 35 to 40 in a minute. From this distressing state, Mr. G——, however, recovered so much, as to be able to leave home about the end of February, and soon afterwards to resume, in some degree, his ordinary professional avocations.

In the following March, notwithstanding the above improvement, he was again attacked by several epileptic fits, but of a much more marked character than any of those noticed previously.

Subsequently, that is in the summer of 1840, Mr. G—— complained of considerable weakness in the back and loins, accompanied with pains of the head, and in the nape of the neck. He soon afterwards became unable to walk steadily without support: and, to use the patient's own words, "he felt as if his body were cut in two, and the lower half falling away from the upper." Both hands and arms now became very weak, and were soon nearly powerless; and he also complained of considerable pain about the fourth cervical vertebra, increased in severity on merely bending his head backwards; but this sensation felt however less painful when rotatory motion of the neck was only attempted.

About the end of autumn in 1840, as most of the symptoms had gradually undergone material alleviation, compared with their former severity, the patient seemed now greatly recovered in strength, and could walk out occasionally, with only the aid of a staff. Indeed, towards the end of that year, the progress made was so far satisfactory, and the general health apparently so much restored, that Mr. G—— was even able to visit his friends and join a little in society. During this temporary amendment, having dined at Kensington, on Christmas-day, he was afterwards, in consequence of not meeting with a conveyance, unfortunately obliged to attempt walking to town, during a very cold and frosty night, when the streets were covered with snow. From the great exertions Mr. G—— made on this occasion, he soon got so fatigued, that being totally unable to proceed the whole way on foot, he was taken home in a carriage, chilled and completely exhausted.

After this misadventure, all the symptoms from which Mr. G—— had previously suffered for a long time so peculiarly, again became as marked and severe as before, until the ability of moving any of his limbs got at last so very feeble, that eventually he was entirely deprived of the use of both legs and arms.

From this time he gradually got worse, notwithstanding various remedies tried by Dr. Webster and others, and died July 22d, 1843.

Autopsy.—The body appeared considerably emaciated, but was not discoloured. Having removed the skull-cap, some effusion of lymph was found under the arachnoid membrane covering the left side of the brain, along with turgescence of that and the other hemisphere; both divisions being pale, and exhibiting a watery aspect, although their texture was firm and compacted. The ventricles of the brain seemed large, particularly the left; and about two ounces of serum were effused in these cavities; the foramen commune being at the same time larger than

natural. The arachnoid tissue extending over the pons Varolii adhered to the parietal layer of that membrane; but no tumor, or any other change of structure, was found either in the brain or cerebellum, excepting that the latter organ appeared anemic, and rather softer in texture than ordinary.

Having carefully laid open the vertebral column, throughout its whole length, the theca, corresponding to the three or four lower cervical vertebræ, was found to be much distended; and on being cut into, the arachnoid cavity, with the sub-arachnoid tissue, appeared filled with lymph, which evidently had been some time effused; as the embranes were thereby united to each other, and also to the cord. On making a more minute examination of the parts, the adhesions of the membranes to the cord were discovered to be much firmer at its anterior than posterior portion; indeed, they were actually so strong as to be inseparable from the medulla without rupture. At this particular part, the medulla also appeared larger than usual, felt soft and pulpy to the touch, and on being divided by the knife its substance seemed to be in an almost diffluent state, infiltrated with serum, but exhibiting a natural colour. For the extent of half an inch above the point just described, the cord had a dusky red tinge, appearing, however, of the ordinary consistence. In the anterior and posterior columns, not much difference was observable to the naked eye at the first superficial examination of the diseased part of the medulla; although both divisions of the cord seemed considerably softened, infiltrated and disorganised, particularly in the posterior columns; whilst as well above as below the affected portion the medulla was healthy, and quite natural in appearance.

Case of Bronchial Calculus, with observations on Disease of the Bronchial Glands. By John Charles Graham Tice, M.D.

Mr. Aldridge, quarter-master of the 8th Regiment, aged 48, and of plethoric and nervous temperament, complained, Sepetmber 7th, 1842, of pain in the right side, affecting his respiration to a trifling extent. Pressure over the liver caused uneasiness; the tongue was furred, and the bowels confined, but the pulse natural. His greatest discomfort was from a disagreeable taste, "resembling fried onions." He was freely purged, with temporary relief; but his discomforts soon returned to become aggravated, especially the fœtor of the breath, which, however, though so distressing to himself, does not seem to have been perceptible to others.

Cough and dyspnœa now came on, and the only posture in which he obtained any degree of relief was leaning forward on his knees. Stethoscopic examination showed nothing amiss either about the lungs or heart, but his voice became hoarse at intervals, and it was suspected that the larynx was implicated. The symptoms rapidly increased, and he died comatose at the end of six weeks from the commencement of his illness. The following appearances presented themselves.

The removal of the sternum was difficult, in consequence of the ossification of the cartilages of the ribs. The right lung was a little gorged with blood and rather dark coloured, but it was free from adhesions, and in other respects perfectly healthy. On raising it and dividing its attachments, the knife suddenly entered a *cavity*, of the size of a pullet's egg, from which a most offensive odour was emitted. This cavity was formed by an abscess in a mass of enlarged bronchial glands, situated at the bifurcation of the trachea. It opened into the right bronchus, ulceration having destroyed a large portion of that tube. The inferior margin of the ulcerated opening was thickened and elevated: on the other side the abscess communicated with the left bronchus by an aperture about half an inch in diameter, having inverted and thickened edges. Posteriorly, the abscess had made its way into the œsophagus by ulceration. The opening into that canal was capable of admitting a large-sized bougie. The abscess contained a quantity of calcareous matter, some very hard, some of a soft consistence. The whole, when first examined, was of a dark melanotic aspect. A triangular portion of the hard calculous matter had firmly wedged itself into the aperture communicating with the right bronchus. The concretion was found, on analysis, to consist of phosphate of lime.

On Congestive Pneumonia consequent upon Surgical Operations, Diseases, and Injuries. By JOHN E. ERICHSEN, Esq.

MR. ERICHSEN has had an opportunity of making his examinations in 62 cases, and arranges them as follows.

1. Those in which there were unequivocal evidences of pneumonia, amounting to 28; not far from one-half the total number.

2. Doubtful cases, in which the lungs presented the characters common to the first stage of pneumonia and congestion. These amount to 11.

3. Cases in which the lungs were found diseased, but not inflamed or congested. These amount to 9.

4. Cases in which the lungs were healthy, amounting in number to 14.

In the 28 cases alluded to, the right lung alone was affected but three times; the left lung alone also but three times; and both lungs together in not less than 22 cases. With respect to the character of the inflammation of the lungs following surgical operations, in the great majority of cases it is of the asthenic character, being "essentially a pneumonia complicated by a superadded congestion."

In addition to the ordinary circumstances leading to the production of pneumonia, Mr. Erichsen thinks that there are peculiar causes tending to it as a consequence of operations.

1st, Those circumstances which act mechanically, by causing a congestive state of the posterior part of the lungs, as the recumbent posture long continued. 2d, Those causes which act by diminishing the power of the nervous system, such as long-continued and copious suppuration, confinement in the wards of an hospital, and fever, especially of the typhoid type.

In regard to treatment, our author thinks it is of more importance to aim at remedying the state of the nervous system, and preventing congestion by change of posture, than to direct our efforts, as in ordinary inflammation, to the suffering organ. "With this object in view, the energies of the nervous system should be supported and increased by such stimuli and tonics as the patient may be able to bear; as, for instance, carbonate of ammonia, decoction of senega, quinine, and, in extreme cases of depression, wine and brandy. The inflammatory condition of the lungs should, at the same time, be combated by means of calomel, combined with minute doses of opium, and by counter-irritation in the form of dry cupping, blistering, stimulating embrocations, or turpentine epithems. Blood-letting in any form, whether general or local, is not only contra-indicated by the already enfeebled condition of the patient, but would, to say the least, be perfectly useless."

Researches into the Connection existing between an unnatural degree of Compression of the Blood contained in the Renal Vessels, and the presence of certain Abnormal Matters in the Urine. By GEORGE ROBINSON, Esq. Communicated by MARSHALL HALL, M.D. F.R.S. &c.

MR. ROBINSON published a very interesting paper on "Albuminuria" in this journal last year, to which we beg to refer our readers. The general result of his researches is, that not only albumen and blood, but coagulable lymph or fibrine, escape into the urinary passages in consequence of obstruction of the return of blood through the renal vein; congestion of the blood in the renal vessels is produced, giving rise to phenomena identical with those of the primary effects of inflammation.

An Account of an unusually large Biliary Calculus, voided from the Rectum. By JAMES ARTHUR WILSON, M.D. Physician to St. George's Hospital.

THE calculus here described is "large as a full-sized walnut," and yet, during its passage into the bowel, it excited no pain. The patient was a gentleman aged 73, and he was affected with hiccough and vomiting during many days before the calculus made its appearance.

In less than a fortnight from the first attack (November 1842) the urine and fæces resumed their natural appearance, and the skin was no longer yellow. After a time the symptoms returned, and he had frequent fits of sickness, with offensive discharge from the stomach, "black as coffee-grounds." About the middle of December the

bowels, previously inactive, began to relieve themselves spontaneously, and gave passage to a very large biliary calculus, which, on chemical examination by Dr. Bence Jones, proved to consist, in the centre, of nearly pure cholesterine, while, externally, it was composed of inspissated bile, with an admixture of fatty matter or cholesterine.

On Fatty Degeneration of the Arteries, with a Note on some other Fatty Degenerations. By George Gulliver, Esq. F.R.S. Communicated by Thomas Hodgkin, M.D.

The liability of arteries to be affected with what is called "atheromatous" and "steatomatous" degeneration of their coats has long been known, but the specific nature of these morbid changes does not seem to have been so minutely investigated previously as has now been done by Mr. Gulliver. By the aid of a microscope the following constituents may be observed, viz. transparent crystalline pearly plates, oily globules of various sizes, small earthy concretions, and a multitude of very minute particles, forming a kind of ground for the others. These are best seen when the matter is diluted with water or weak acetic acid. The crystals are cholesterine. There is almost always wasting of the middle coat of the vessel at those points which are near the fatty matter, and some thinning of this coat generally accompanies the thickening of the internal membrane. Ossification of the arteries, or thickening of their lining membrane, is generally attended with the presence of fatty matter between this coat and the middle one, as well as in the substance of both. Two plates are given in illustration, and the following conclusions drawn:—

1. The white or buff-coloured opaque spots of the inner membrane of the arteries are of a fatty nature.

2. The soft matter, which has been generally called atheroma, and which often collects between the inner and middle coats, is also fatty.

3. The fatty matter is frequently found in the substance of both these coats.

4. A fatty degeneration of the tunics of the arteries is generally connected with that state of them which is the most frequent cause of aneurism, as well as of their obstruction, occlusion, or wasting, in aged people.

5. The matter usually contains cholesterine and oleine, and often some margarine.

6. The tunics of ossified arteries, as well as the bony plates, are often pervaded by the fatty substances just mentioned.

Mr. Gulliver is of opinion that these fatty degenerations act an important part in various diseases, especially consolidation of the lungs "in every variety," and in fatty degeneration of the liver.

Remarks on the Calculi in St. George's Hospital. By Henry Bence Jones, M.A. Cantab., Licentiate of the Royal College of Physicians. Communicated by Cæsar H. Hawkins, Esq.

This paper gives the result of an interesting examination by Mr. Jones of a considerable collection of calculi contained in the museum of St. George's Hospital,—most of which were presented by Sir Benjamin Brodie.

Of these calculi, 233 have been divided; and from the internal structure thus exhibited, it appears that 46 are simple, 40 compound (or consisting throughout of a mixture of two or more substances), and 147 alternating, Of these last, 83 have a simple nucleus and in 58 the nucleus is compound.

If, again, we inquire how often the same substance forms either an outer calculus or a well-marked layer, we find not less than 450 distinct deposits. Uric acid occurs, either alone or mixed with other substances, 135 times; urate of ammonia, 222 times; oxalate of lime, 163 times; the phosphates, 139 times; urate of ammonia with oxalate of lime, 80 times. The urate of ammonia would appear to exist in the urine in a state of health: "the rapid deposit of this substance when urine is evaporated under an air-pump, over sulphuric acid, and the change which ensues if even carbonic acid is first passed through the liquid, admits of no other conclusion." Litmus paper is reddened by the urate of ammonia; and, therefore, the mere existence of that phenomenon does not, *per se*, warrant the exhibition of alkalies.

The presence of the phosphates gene-

rally shews either a neutral or alkaline state of the urine, and our author infers that "uric acid and the phosphates must exist very rarely in the same deposit." Again, it is inferred that the occurrence of the oxalate of lime is independent either of acidity or alkalescence. In only 97, out of 252 cases, was much free acid secreted; or only twice in five cases were alkalies necessary in order to remove the acidity of the urine.

In an appendix an account is given of between 20 and 30 calculi which belong to Mr. Hawkins. One of these proves the existence of cystine at so early an age as two years.

MEDICAL GAZETTE.

Friday, November 3, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

LATE HOURS IN BUSINESS.

THE unhealthiness of great towns is a constant subject of comment among hygienic writers; and the causes to which it is attributed are both numerous and important. The crowded lodging-houses in which so many of the poor drag on their life—the general adulteration of food—the habit of spirit-drinking, all play their part in this tragic drama. Let the rustic reader, safe and exulting in his home-brewed ale, imagine the effects of porter drugged with opium and cocculus indicus, and not taken by the half ounce, like a narcotic mixture, but quaffed by the pint and the gallon, as if it were the most innocent beverage in the world!

Again, the anxious mode of life, which is the curse of great towns, the gambling which takes place, not merely at the play-table, but on the Exchange and in the Corn Market, ranks as a heavy item among the causes which undermine health, and shorten life. It is this anxiety which makes us prematurely old, and anticipates the epoch of gray hairs.

Another obvious cause is the late hours, not merely of the votaries of pleasure, but also of the slaves of business. Mr. Arthur J. King, honorary secretary to an association for abridging the hours of business, has written some pamphlets on this subject, with the zeal of a man thoroughly in earnest. Shops, as our readers well know, are generally open for 13, 14, and 15 hours a day; and to stand behind the counter from 8 in the morning till 10 at night is the lot of unnumbered shopmen and apprentices. The master may retire at 5 o'clock to the comfortable seclusion of his back parlour; but his coadjutors must continue their slavish toil, and stand for five hours longer in an atmosphere contaminated with the gas burned in it. Add to this the unbearable glare of this cheap and "business-like" light, and you will have at least one good reason why the townsman's life is so much shorter than that of his rustic brethren. What with the carbonic acid gas produced by the respiration of the shopmen, and the combustion of the gas, (to say nothing of the carburetted hydrogen gas which escapes unburned,) it must be confessed that the air of our metropolitan shops differs most lamentably from that which passes over ploughed fields and green hedges. Now, the natural method of relieving the flushed cheek and heavy brow produced by these gaseous poisons, would be to walk out into the country. The morning, of course, would be the most appropriate time.

As one who long in populous city pent,
Where houses thick and sewers annoy the air,
Forth issuing on a summer's morn to breathe
Among the pleasant villages and farms
Adjoined, from each thing met conceives delight,
The smell of grain, or tedded grass, or kine,
Of dairy, each rural sight, each rural sound.

But alas! for him whose duties begin at 8 A.M. there is no morning's walk into pleasant villages; for the exhausted serf whose duties end at 10 P.M. the only walk is the one up stairs to bed—with the occasional exception of a walk to a divan, for the stimulus of tobacco and whisky.

"A deficiency of exercise," says Mr. King, "is another evil occasioned by the length of the hours of business. At a public meeting held in Wolverhampton, a case was mentioned of a young man in a chemist's shop in Lancashire, who had crossed the threshold of the shop but once in three weeks, and then on an errand of business." Nay more, this enormous practical evil is defended by some theoretically. "It is the avowed object of some to extend the hours of business as long as nature will hold out. It was the declaration of an alderman of London, that he thought bed was the best place for assistants after business." * * *

"Strange that sleep and business—unconsciousness and mechanical performances, should be the only lawful engagements for a man!"

The mind is commonly obtunded in the drooping body; the intellectual powers gradually vanish, and the poor drudges are taught to believe that there is no other use of the mind than in business, and that education ceases with school days, its only object being to enable them to read, to write, and to cipher for business."

The practicability of the reform proposed depends essentially on the fact that all which is now done in fourteen hours might be equally well done in ten; in a word, business may be concentrated, instead of diluted. The first objection to the improvement would be that traders are forced to keep their shops open unconscionably late, by the keenness of competition. The answer to which is, let every shop-keeper join an association pledged to early hours. But some, replies the objector, would not join the association, or, having joined it, would break their agreement, and thus run off with the profits of their more honest neighbours.

True, rejoins Mr. King; but the grinding traders with their long-extended hours would not gain much, for all decent people would stick to the early shops.

We would add, that if a man lost a few pounds by his humanity, he might reckon it so much bestowed on the comfort and improvement of his assistants; and a philanthropist would no more ask them to abstain from fresh air, that he might gain a trifle, than to sleep on straw, that he might save the expense of feather-beds.

An objection, however, which Mr. King has omitted to mention, might be started in poor districts, where the shops chiefly depend on the custom of the working classes. The journeyman cannot buy his goods till his work is over, and if he is not at liberty till 6 or 7, the shops which supply him will be open till 10 or 11.

Among the poorest classes, even the wife is often occupied till the evening. This is a formidable difficulty, which we scarcely know how to get over, except by a return to the practice, (which one reads of in books on popular antiquities) of making Saturday a half holiday for the community in general. Now that utilitarianism has bereaved many schoolboys of this their hereditary right, it may seem Utopian to hope its revival for men; yet stranger things have come to pass.

With this exception, the reform would be as practicable as it would be commendable.

It is a *vexata quæstio* whether chemists' shops could be closed on Sundays. Every friend to their physical

as well as moral welfare must wish it were possible; but Mr. King does not quite overcome the difficulties of the case, when he supposes that medicines are required on Sunday only in cases of sudden illness. A case of phthisis of twelve months' standing may demand a fresh prescription on a Sunday; and if chemists' shops were closed, the physician's patients would lose an advantage which the patient of the general practitioner would still enjoy. He thinks that in the rare case of medicine being wanted on Sunday, the chemist might be fetched home by a special messenger, as a physician is brought to a case of apoplexy. But he forgets that a physician has regular patients to visit on Sunday, as well as these alarming cases of sudden illness. Mr. King also proposes a *rota*, or alternate succession, of chemists who are to open their shops on ordinary days after half-past 6, and on Sundays, "if necessary." If nothing but medicine, moreover, was sold by them on Sunday, it would materially diminish the mass of business, and perhaps give entire rest to all but one assistant, where several are kept.

Some customers, we imagine, would object to change their shop, and shrink from taking the next offered by the *rota*, especially if driven to this expedient even on week-days at half-past 6; if confined to Sunday only, it might perhaps be borne.

If the chemists, however, from the peculiarity of their trade, afford less than an average hope of improvement, many other tradesmen are far above the middle level, and would find eight hours a day an ample time for keeping their shops open.

Mr. King supposes the objection made, that it is impossible to finish business at half-past 6, as a general rule; for in the season it is as much as can be done to finish at 9 or 10. Suppose, for instance, a wedding suit is ordered in a hurry, what is to be done? Mr. King answers that wedding suits ought not to be ordered in a hurry, and that as a match is not made up in 36 hours, neither ought the clothes. Without giving Mr. King the pleadings of the guest invited to the wedding, and the tailor whom he patronizes, we would comprehend this and many other points of detail in one simple generalization. The question is one between the convenience of the customer, and the health of the trader or workman. This question, like most others, is settled by a compromise; but, at present, the adjustment is so extremely on the side of convenience that the point of compromise might be moved considerably to the side of health, to the manifest advantage of the community.

There are two objections to the reform, which it is hardly necessary to consider: 1. That young men would misapply the time bestowed on them. 2. That they may read in the shop, during the intervals of custom, "snatching a fearful joy."

As to No. 1, if worth anything, it is an argument against liberty in general.

No. 2 forgets that exercise is as essential as reading. In many shops, too, far from reading being allowed, it is the law, that during the intervals of business, the young men are to whisk about the goods, to give an air of employment, and dazzle the entrant customer.

Mr. King very judiciously exhorts tradesmen, who constitute part of the public to every trade but their own, to avoid buying as well as selling after a certain hour. To effect all this, combination is requisite, but unanimity in the most literal sense is not necessary; for a minority of shops remain open on Sunday, yet the great majority being closed, the community is benefited accordingly.

We cordially hope that the Association will succeed in the noble object of their labours; and that the industrious persons whose cause they advocate may obtain time for improvement of the mind, and the relaxation of the body. Perhaps a time may come when it will be seen that the hours of labour may be generally shortened, with advantage instead of loss to the community. The Greek epigrammatist thought six hours of daily toil sufficient.

Ἐξ ὥραι μοχθοις ἱκανωταται ἀι δε μετ' ἀυτας
Γραμμασι δεικνυεναι ΖΗΘΙ λεγονσι βροτοις.

Six hours unwearied to stern labour give,
While those that follow cry to mortals "live!"

FIRST FORMATION OF THE GRAAFIAN FOLLICLE.

Bischoff agrees with Henle in viewing the Graafian follicle in its early state, when it has for its wall a simple structureless membrane, as similar in nature to those vesicles which Henle and Goodsir find to be the elementary constituents of glandular structure.

This view of Henle does not coincide with the representation given by Valentin of the development of the ovaries and Graafian follicles. The latter he describes as being formed within blind tubes, which originally constitute the structure of the ovaries, as the seminiferous tubes the testicles, but which become obliterated by the increasing growth of the Graafian follicles. Bischoff, however, says he has never been able to discover any such structure in the ovary as that which Valentin describes, notwithstanding every possible attention in the examination of the embryos of man, the cow, sheep, sow, dog, rabbit, hare, and rat.

Henle's view is likewise not in agreement with what Martin Barry says on the subject. According to the latter, the first-formed part of the Graafian follicle, which he calls *ovisac*, is developed around the already existing germinal vesicle.

Though Valentin differs from Henle and Bischoff in the account of the conditions under which the Graafian follicle is first developed, he appears to agree with them that the ovum is formed within the Graafian follicle, and not, as Barry states, the Graafian follicle around the rudiments of the ovum. *Brit. and For. Medical Review.*

FIRST FORMATION OF THE OVUM.

Purkinje, the original discoverer of the germinal vesicle, conjectured that this might be the part of the ovum first formed. The observations of Baer and of Wagner on certain of the invertebrata, showed that as regards these animals such is the case; and as regards vertebrata, Dr. Martin Barry believed his observations warranted him in stating, that in the rabbit and pigeon at least, the germinal vesicle is the part of the ovum first formed.

The following is Bischoff's account of the first formation of the mammiferous ovum:—The fundamental part of the Graafian follicle being formed in the manner above described, contains a clear fluid, in which are suspended nuclei and granules, the latter quite similar to the subsequent yelk-granules. The size of the Graafian follicle at this period varies from 1-1000th to 1-333d of a Paris inch. On the inner surface of the *tunica propria* of the follicle, there is deposited a layer of endogenous cells as an epithelium. After this, there is found in the centre of the follicle a nucleated cell perfectly similar to the germinal vesicle, which, indeed, Bischoff holds it decidedly to be. Around this vesicle are then found deposited those granules similar to yelk-granules, and that in greater quantity the more advanced the development is. At the next stage, when he was able to satisfy himself of the precise state of matters, Bischoff found in the Graafian follicle the ovum with all its essential parts, viz. vitellary membrane (zona), yelk, germinal vesicle, and its spot. The smallest follicles in which such an ovum could be distinguished measured 1-100—1-20th of a Paris inch in diameter.

In the ova at this period, the vitellary membrane (zona) is very faint, and its external boundary not well defined. The yelk also is still clear. These parts, therefore, are difficult of being seen through the wall of the Graafian follicle, especially as it is no longer so transparent as formerly, in consequence of its *membrana propria* being now surrounded externally by a quantity of fibre-cells, from which is developed the cellular and vascular coat which subsequently forms the wall of the Graafian follicle. Hence Bischoff has not been able to perceive the formation of the vitellary membrane (zona). Everything, however, appears to him in favour of Valentin and Henle's opinion, that the yelk-granules are deposited around the germinal vesicle, and then become surrounded by the vitellary membrane (zona). Bischoff here repeats that in the formation of the ovum he has never seen, in addition to the vitellary membrane (zona), a trace of any other membrane to which the name

vitellary might be given, such as Valentin and Barry allege exists.

The earlier the stage of development, the larger is the ovum in proportion to the Graafian follicle. The ovum, indeed, is at first almost closely embraced by the Graafian follicle, as the ovarian ovum of the bird is by its capsule. The earlier, also, the stage of development, the larger is the germinal vesicle in proportion to the ovum.—*Ibid.*

MORTALITY OF THE METROPOLIS AND PRINCIPAL TOWNS IN ENGLAND.

By the quarterly tables of mortality made up to the 30th of September in the present year, we find that the number of deaths registered in the metropolis during the last year was 45,272, being less than in any one of the four preceding years. In the principal provincial towns, taking them together, the mortality was about 2,000 more than in 1841, but less than in any one of the three previous years. In the quarter ending the 30th of September, the number of deaths in the metropolis from all causes was 11,091, being about 70 more than the average number in the corresponding quarter for the five preceding years. Of those 2,706, the highest of any particular class of diseases, were from disease of the lungs and organs of respiration: but that number was 136 less than the average quarters of the five preceding years; the next highest class were epidemic, endemic, and contagious diseases, the deaths from which were 2,619—being about 180 more than the average quarters of the five preceding years. Diarrhœa and dysentery prevailed to rather an unusual extent, and appeared to have been equally prevalent in the country. In the provincial districts, scarlatina, measles, and enteritis, had also been prevalent. With respect to the temperature, the mean height of the barometer during the last summer was higher than in 1841 and 1842, or the mean height of the nine years from 1831 to 1840. The fall of rain was 5·662 inches, which is near the average; but it fell on only 23 days; whilst in the summers of 1841 and 1842, it was from 8 to 9 inches, and fell on from 47 to 50 days.—*Times*, Nov. 2.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, October 27, 1843.

R. B. Hole.—F. Smith.—E. Walker.—J. E. Partington.—R. W. Lammiman.—M. Burnup.—A. B. Andrews.—G. V. Birks.—J. C. Croft.—W. Sheppard.—J. N. Greensill.—B. Viret.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, October 26, 1843.

J. Green, Chapel en le Frith.—D. M. Aitken, London.—H. P. Freeman, London.—A. G. M. Moger, Bath.—W. H. Cane, Uxbridge.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, October 21, 1843.

Small Pox	8
Measles	30
Scarlatina	58
Hooping Cough	47
Croup	13
Thrush	9
Diarrhœa	41
Dysentery	16
Cholera	2
Influenza	1
Ague	0
Remittent Fever	0
Typhus	41
Erysipelas	4
Syphilis	1
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	150
Diseasesof the Lungs and other Organs of Respiration	320
Diseases of the Heart and Blood-vessels	20
Diseases of the Stomach, Liver, and other Organs of Digestion	91
Diseases of the Kidneys, &c.	6
Childbed	9
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	3
Arthritis	0
Rheumatism	1
Diseases of Joints, &c.	5
Carbuncle	0
Phlegmon	0
Ulcer	1
Fistula	1
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	122
Old Age or Natural Decay	80
Deaths by Violence, Privation, or Intemperance	14
Causes not specified	12
Deaths from all Causes	1106

METEOROLOGICAL JOURNAL.

October.	Thermometer.		Barometer.	
Wednesday 25	from 49	to 37	29·20	to 29·18
Thursday . 26	28	48	29·20	29·33
Friday . . . 27	28	47	29·41	29·23
Saturday . 28	49	42	28·85	29·06
Sunday . . 29	29	47	29·35	29.37
Monday . . 30	31	*57	29·22	29·04
Tuesday . 31	49	45	29·14	29·19

Wind, on the 25th, N. by E.; 26th, N. and W. by N.; 27th, 28th, and 29th, S.W.; 30th, E. and S. by E.; 31st, N.

25th, morning cloudy, with rain, afternoon and evening generally clear; 26th, 27th, and 28th, generally clear. 29th, moning foggy, hazy during the day; 30th and 31st cloudy, with frequent rain.

Rain fallen, 1 inch and ·535 of an inch.

* This temperature occurred at 8 in the evening.

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, NOVEMBER 10, 1843.

CLINICAL LECTURE
ON
A CASE OF PNEUMOTHORAX,

Delivered at St. Thomas's Hospital,

By Dr. Barker.

The case which I take as the subject of my lecture this morning, is one which did not present any great difficulty to forming a correct diagnosis, and there was nothing remarkable either in its treatment or termination; but it is well worth your careful attention as a good illustration of the way in which diseases of the chest, the ordinary symptoms of which are, for the most part, easily recognized, may be modified and changed by adhesions of the pleuræ, the consequence of previous disease. It is also an example of the frequent absence of the usual signs of acute inflammatory disease, especially of the serous membranes, when the patient is much debilitated, or when the surface of the membrane has been changed by a former attack of inflammation. A full history of the case has not been preserved; but my notes of it are sufficient to enable me to lay before you its more important features, especially those relating to the two points just mentioned.

George Ivory, aged 49, formerly a sailor, but latterly working as a carpenter, was admitted into King's Ward on the 21st of March, 1843. No accurate account of the time when he was attacked, or of the nature of his first symptoms, could be obtained, either from himself or friends, except that he had been ill several days; and, it was also stated, that he had formerly been very intemperate, but had latterly, in consequence of his circumstances being much reduced, lived very low. At the time of admission he was labouring under the symptoms of a mild form of continued fever, such as are usually observed at the end of 12 or fourteen days. The delirium, however, which was present, resembled that of delirium tremens much more than that which is usually seen in typhus. He had not slept for several nights.

The bowels not having been open for three or four days, an injection was administered, which acted freely; and he then became more rational and quiet; but he was still rather delirious, and there was no change in the nature of his delirium. He took a third of a grain of hydrochlorate of morphia in the evening, which, although it did not produce much sleep, caused him to pass a quiet and comfortable night. The next day, the pulse, tongue, and skin, and the muscular and nervous systems, all indicated an advanced stage of continued fever, without any extraordinary depression; and unaccompanied by signs of disease in the head, chest, or abdomen, with the exception of respiratory sounds, which will be noticed afterwards; and delirium, which, however, was less than on the previous day, though it retained the same character as at first. He was ordered to have wine, brandy, and porter, together with such diet, in the form of beef-tea, arrow-root, milk, &c. as he could take.

He passed a good night without having the morphine repeated; and, on the 23d, he was better in all respects. He liked the stimulants, and took a great quantity of nourishment. He improved rapidly in all respects until the 28th. When I saw him on the 29th, there was no apparent change for the worse; but I was informed he had had a long-continued rigor on the morning of the 28th, had been very hot during the whole afternoon, and had perspired freely during the night. The rigor occurred again on the morning of the 29th; but, when I saw him in the middle of the day, he appeared as well as usual; and, after a most careful examination, I could detect no sign of local disease, except in the chest, as I shall mention immediately.

A mixture, containing two grains of

quinine and a little sulphuric acid, was ordered to be taken three times a day.

After this day he had no rigors, perspired very little, and the improvement again progressed; but he did not regain muscular strength so rapidly as at first, and he complained of a constant slight cough. A blister was applied to the chest on the 31st, and was repeated on the 5th of April, giving good relief.

No minute record of this case having been kept, I can only speak in general terms respecting the physical signs of disease in the chest. At the time of his admission the whole chest was carefully examined, and no sign of disease could be detected, except slight sonorous and sibilant râles, here and there, such as might be expected in a man subject, as this patient was, to chronic bronchitis. The anterior and lateral parts of the chest, as far back as the stethoscope could be applied without making the man sit up, were examined at every visit, without any change in the character of the respiration being detected. On the 31st, when the cough became more troublesome, the whole chest was again carefully examined, when every part gave a clear sound on percussion, and no unnatural sound was detected, except the sonorous and sibilant râles, which were slightly increased. After this no very careful examination of the chest was made, except at the anterior part, which was examined daily, and one complete examination at my visit on the 5th of April, until the 8th, when my attention was arrested by the very feeble sound of the heart, and the absence of all impulse in the præcordial region; whilst, at every systole of the heart, a distinct splash, accompanied with a slight metallic ring, could be heard a little below, and about an inch and a half anterior to, the left mammæ—where it was most distinct — and about one inch in every direction from that spot.

A complete examination of the chest was immediately made. Over the whole of the right side the sounds heard on percussion and auscultation were quite healthy, except the râles already mentioned, which were slight. Over the anterior part of the left side, to a little below the mamma, and over the lateral part to a lower point, and as far back as half way between the sternum and spine, the resonance on percussion was good, the respiratory murmur was distinct, though not so loud as on the right side, and slight sonorous and sibilant râles could be heard. Over a space of not more than two square inches below and anterior to the left nipple, where the splashing sound made by the heart could be heard most distinctly, the resonance was much louder than natural, but no respiratory murmur could be heard there. At every other part of the left side percussion elicited a dull heavy sound, and no respiratory murmur could be heard. Except the signs just enumerated, there were no symptoms of disease within the chest. The pulse was quiet, the respiration neither hurried nor laboured, the position in bed natural, and the cough much slighter than it had been a few days before.

I immediately called your attention to this case, as one of pneumothorax, in which a complete collapse of the lung was prevented by adhesions.

Of the existence of fluid and air in the left side of the chest there was conclusive proof in the splashing sound, and tinkling or metallic ring, caused by the movement of the heart: such sounds could only exist in a case where there was either air and fluid in the cavity of the pleura, or a large half empty excavation in the lung; and the whole history of the case was opposed to the latter supposition. It was, moreover, in the highest degree improbable that a large tuberculous cavity should exist in the lower part of one lung, whilst all the rest of that lung, and the opposite side, were free from tuberculous disease; which was certainly the case with this patient. On the other hand, the symptoms were consistent with the supposition that air and fluid existed in the left pleura, and that the left lung was partially kept in contact with the ribs, and prevented from collapsing completely, by adhesions. The only symptoms which I could not explain were, the permanence of the very clear resonance on percussion, at one particular spot, whatever might be the position of the patient; and the absence of any sign of the heart being pushed to the right side of the chest, when it was evidently not in its proper position on the left; since no impulse, and very little sound, could be perceived in the præcordial region; and there was clear resonance, and an entire absence of heart sounds or impulse, on the right side of the sternum. The first of these anomalies I supposed to be caused by some peculiarity in the adhesions; the second I could not account for.

The case was obviously one not admitting of any treatment save that already adopted—stimulants and nourishing diet. The patient continued perfectly easy and comfortable, making no complaint, except of muscular debility and slight cough. The pulse remained under 90, small and feeble; the respiration was not hurried nor uneasy; he lay on the back, a little inclined to the right side; the tongue was moist and clean; the bowels regular; appetite good; sleep natural.

Without any marked change he expired suddenly, on the morning of the 10th, while getting into bed.

A post-mortem examination, of the chest only, was made 48 hours after death.

The right lung was healthy, and there were no adhesions of the right pleura. The heart was pushed to the right side, so that not more than an inch of the apex was to the left of the sternum. There was air anterior to the apex, and the base was completely overlapped by the edge of the right lung, so as to render any sound or impulse, on the right of the sternum, during life, impossible. On the left side of the chest the lung was found adhering to the anterior and lateral parietes, except at the lower part, where, over the præcordial region, there were no adhesions, the anterior part of the pericardium being at least an inch distant from the chest, and separated from it by air; the posterior part was immersed in fluid. At the side of the chest, the adhesions were continued down to the diaphragm, in such a manner that the air could not have changed its position, so as to rise to the upper part of the chest posteriorly, unless the man had had his feet much elevated, and then, after having been turned on his face, had been placed in the erect position. Thus the anomaly of the air in the cavity of the chest, not changing its place as the position of the man was changed, during life, was completely explained. The lower and the posterior parts of the chest were filled with serum, intimately mixed with a fine yellowish granular matter, like broken down fibrin. Although the adhesions did not affect the greater part of the posterior part of the left lung, there were two narrow bands of adhesion, stretching from the lower part of the upper lobe directly backwards, which, no doubt, greatly assisted in preventing the compression of the lung by the accumulating serum. The pleura itself was covered with a thin rough layer of fibrin, which, though closely adherent, could be scraped off with a scalpel. On examining the partially collapsed lung, to discover the cause of the pneumothorax, I found no disease in any part, except a small gangrenous spot, from which an eschar had evidently separated, at the posterior and lower part of the lower lobe; and this, no doubt, had been the cause of the recent attack of pleuritis, as well as of the entrance of air into the cavity of the pleura.

This is a singular case; but I have not called your attention to it so much on account of its singularity, as for the sake of the useful lessons, applicable to ordinary cases, which may be learned from it. One of these practical hints is sufficiently obvious—that adhesions may cause respiratory murmurs to be heard in parts where, in certain diseases, no respiration would be going on if there were no such adhesions. No general rules can be laid down upon this point, and it would be tedious to record every kind of deviation from the usual symptoms of disease which has arisen from this cause. I shall content myself, therefore, by calling your attention to the fact, that partial adhesions, of greater or less extent, in different cases, may exist in every part of the pleuræ; and you may look for corresponding variations in the sounds, heard on percussion or auscultation, whenever pleuritic effusions of any kind occur in such cases.

But the absence of the ordinary symptoms of pneumothorax, as indicated by percussion and auscultation, in consequence of adhesions of the pleuræ, is not the only peculiarity in this case from which an important practical lesson may be learned. A great change took place in the chest of this man, without any alteration in his symptoms which could have led to the suspicion of such change. On the 31st of March the whole of both lungs were permeable to air, and there was no fluid in the pleuræ; eight days later there was so large a quantity of fluid, in the left pleura, that the lung was compressed to one-third of its natural size; and, during the same period, there had been an attack of pleurisy sufficiently acute to cover the whole pleura, where it was not adherent, with lymph. Nevertheless there had been no pain, no uneasiness, no acceleration of the circulation or respiration,—the respiration, indeed, had become more healthy,—no fever, and no unusual position of the patient in bed—in short, none of the prominent symptoms we should expect in such a case. How are we to account for this, and what are the cases in which we ought to look for disease of the chest without the ordinary signs? A solution of this question may, I think, be found in the following expression of Andral, when speaking of diseases of the pulmonary tissue. "Almost all the morbid states of these parts have one common and very important effect—that of diminishing the extent of surface on which the blood ought, when the parts are in a healthy state, to be presented to the air." But we may imagine two different results, as regards the arterialization of the blood, in the same state of the lung: a portion of lung being rendered unfit, more or less, for respiration, if the quantity of blood remains undiminished, there will be the ordinary train of symptoms; but if, the disease of the lung being the same, the quantity of blood be diminished in proportion to the diminution of serviceable lung, no such symptoms occur. This is proved by what we may observe every day. The difficulty of breathing and lividity of the countenance observed in pneumonia, in pleuritic effusions, and, most of all, in bronchitis, are removed by the abstraction of blood—or, in other words, by restoring the balance between the quantity of blood to be arterialized and the quantity of lung capable of performing that duty—long before any great change can be made in the state

of the lung itself. We constantly see similar phenomena in the course of many diseases: in emphysema of the lung; in the altered condition of the mucous membrane arising from chronic bronchitis; in partial solidification of the lung from any cause; and, occasionally, in pleuritic effusions, the patient may, if, either from the effect of the disease or of remedies, the quantity of blood be reduced in proportion to the disease of the lung, be almost free from many of the symptoms of the existing disease; there may be neither cough, nor pain, nor difficulty of breathing. But disturb the balance which has been gradually established—let the circulation be accelerated by exercise, by mental emotion, by stimulants, or by febrile excitement—or increase the quantity of blood by too full living, or want of attention to the secretions—or let the quantity of serviceable lung be farther diminished by an attack of bronchitis, however slight—and you will immediately see the latent disease proclaimed by all its ordinary symptoms. Such diseases of the lungs, as I have alluded to, are much more apt to remain latent, when, in addition to the diminution of blood to be arterialized, which takes place in the course of both acute and chronic affections of various kinds, we find the sensibility of the nervous system much blunted; and, it is from these causes combined, that we so often find pneumonia gradually creeping on, until a considerable portion of one or both lungs is affected, in old, feeble, bedridden persons, or in those who are in an advanced stage of, or in the early convalescence from, typhus. I was once present at the post-mortem of a middle-aged woman, who had long been depressed by want and mental anxiety. She "had sunk gradually, without a symptom," as I was told by the medical attendant, although she had been well taken care of for a month before her death. The whole of the right lung, except the anterior edges, was hepatized, and at least half the left lung was in the same state. Both the medical man who had seen her daily for some time, and the nurse who had been almost constantly in the room, assured me that no symptom or complaint had ever directed their attention to the state of the chest. The stethoscope had not been used.

The observations I have made on the possibility of chest diseases remaining latent, does not, of course, apply to those which are attended with much febrile excitement, or great secretion in the air passages; but it is important to bear in mind that some of these diseases which are classed amongst the more severe pyrexiæ often exist—especially under the circumstances just specified—without any, or with very little, fever.

In addition to a great part of Ivory's left lung being compressed by pleuritic effusion, without any apparent impediment to respiration, he had an attack of acute pleurisy after the 31st of March, without pain, fever, or any difficulty of breathing, which was accidentally discovered on the 8th of April. I have often observed attacks of acute inflammation of serous membranes without any of that pain which is so characteristic, fever, or disturbance of function, under two circumstances, which may exist separately or together—first, when all the powers of life are much depressed by previous disease; and, secondly, when the membrane has been altered by a previous attack of inflammation. Now Ivory was debilitated by former habits of intemperance, by hardships immediately before his last illness, and by an attack of fever, from which he was just convalescent; and the surface of the pleura had been changed by a former attack of inflammation, as was proved by extensive old adhesions. His was a case, therefore, most favourable for the existence of latent pleurisy. I have seen many similar cases of pleurisy; and within the last year I have seen two cases of peritonitis, from perforating ulcers of the intestines, supervening upon a chronic form of the disease; and one of pericarditis, in which the pericardium was scabrous, probably from a former attack; all occurring in debilitated persons, and all wanting the symptoms which usually attract our attention in such cases.

From these observations you will perceive that the case, which has now been considered, is a good illustration of the two points mentioned in the commencement of my lecture—first, that partial adhesions of the pleura may change, or greatly obscure, the symptoms of pleuritic effusions of all kinds, by causing respiratory sounds to be heard where they do not, in such diseases, ordinarily exist; and, secondly, that many acute diseases, especially of the organs of respiration, may remain latent, though not beyond our powers of discovery, provided due diligence be used. From this you may learn that cases occur in which a careless and insufficient use of the stethoscope not only fails to discover the truth, but leads into error; and also that, in many diseases where there is great debility, especially in fever, a constant and complete examination of the chest is necessary, even if there be none of the ordinary signs of pulmonary disease.

I have dated the commencement of the pleuritic effusion between the 31st of March and the 8th of April; I feel no doubt, however, that the examination at my visit on the 5th was sufficiently careful to assure me that no pleuritis existed on that day.

CLINICAL REPORTS OF CASES,

TREATED AT THE GLASGOW EYE INFIRMARY.

By William Mackenzie, M.D.

Complete ectropium of left upper eyelid from cicatrization, consequent to an abscess — Cure by a blepharoplastic operation.

Case.—No. 13190, Aug. 10, 1843.—Maria Connell, aged 14. When about 16 months old, received an injury by a gate falling upon her, in consequence of which an abscess formed in left upper eyelid, which, bursting through the skin, discharged matter for many months. This was followed by ectropium, to such an extent, that, when the eyes are open, a large portion of the conjunctiva of left eye is exposed, and the cilia tilted up so as to be in contact with the eyebrow.

Fig. 1.

The ectropium is increased when she attempts to close the eye. There is a very great deficiency of skin in the everted eyelid, and it feels as if bound by a band to the inner surface of the orbit. Upper part of left cornea hazy, and vision of that eye so imperfect that she with difficulty distinguishes one finger from another with it. Keeps the eye constantly covered, to hide the deformity.

The everted eyelid was divided transversely in the seat of the cicatrice, and the edges dissected so as to open up the wound, A B, fig. 2, and allow the lid to resume its natural situation. A piece of pasteboard was laid on the temple, and the flap, B C, was insulated with the scalpel, of the exact size and shape of the piece of pasteboard. The anterior edge of the flap was continued into the wound of the eyelid. The flap was dissected off, except at its basis, B, turned

Fig. 2.

round into the wound of the eyelid, B A, and connected with its edges by stitches. The edges of the wound in the temple were brought together by three stitches. A considerable degree of ectropium still remained. Both eyes were covered with spread pledgets, and a double-headed roller applied from the hind-head forwards.

13th.—The external dressings were removed. There is little or no swelling about the parts that were cut, and she makes no complaint of pain. The lid appears more in its natural place than it did immediately after the operation, owing, probably, to the support of the dressings and bandage. No stool since the operation.

Cap. Pil. Colocynth, ii. q. n.

14th.—Three of the stitches removed.

Rep. Pil. Colocynth.

15th.—Six more of the stitches removed, being all those which served to keep the flap in its new situation. Two stitches remain in the wound in the temple, which appears quite united. Has considerable motion in the new eyelid. Stripes of court plaister were applied in place of the stitches along the lid, and another stripe across both upper and lower lids. Compresses and a roller were applied over both eyes.

Rep. Pil. Colocynth.

16th.—All the stitches removed, as well as a ligature which was applied on one of the branches of the temporal artery. Two stripes of court plaister applied across the left eyelids, and both eyes covered with a compress and roller.

21st.—All the dressings omitted.

Utat. velamine præ oculis ambobus.

24th.—On closing the eyes, without mak-

ing any particular effort to do so, the left lids do not come together, but leave an interstice between their edges of about one-tenth of an inch in breadth; but on making an effort to close the eyes, the edges of the left lids come together perfectly. On looking straight forwards, the left lids are open almost exactly to the same extent as those of the right eye, but the eyeball is a very little directed more downwards than the right. This seems the effect of having long retained the eye in that position previous to the operation. The cicatrice by which the upper edge of the flap is united to the eyelid forms a depression exactly in the situation of the natural sulcus, formed by the action of the levator muscle. The lower edge of the flap is united without any evident cicatrice. The line by which the edges of the wound in the temple is united is scarcely distinguishable; and it would be impossible to discover by mere inspection that at B any turn or change of place had been given to the flap. Not the slightest eversion remains.

Remarks.—From the very great deficiency of integument in the everted eyelid, there could be no hesitation as to the choice of an operation in this case. It was evident that a transplantation of skin only could remedy the deformity. Suppose that Professor Chelius's method had been had recourse to, and an incision made through the skin of the eyelid, parallel and close to its edge, it might have perhaps been possible to have drawn down the tarsus into its natural place. After this, two or more loops of thread being passed through the skin of the eyelid near its edge, and fastened by plasters to the cheek, to keep the edges of the wound apart, till it granulated and cicatrized, months would have elapsed ere this could have been accomplished; during the whole of which time both eyes would have required to have been covered with pledgets, and a double-headed roller. Even after cicatrization was accomplished, the granulations would have been apt to be absorbed, and the eversion to return. After an incision nearly similar to that recommended by Chelius, Dzondi dressed the wound with resinous ointment mixed with cantharides, to insure a sufficiently copious process of granulation, before cicatrization should commence. He then applied lunar caustic, in order to heal the wound quickly, a practice against which Chelius warns us, as exceedingly likely to cause absortion of the granulations, and thus to defeat the object of the treatment. The methods of Dzondi and Chelius are much more tedious, painful, and uncertain, than the blepharoplastic operation.

It does not answer to trust to the eye, in estimating the size of the flap which is to be insulated and detached. It must be measured by the wound, and the measure transferred to the piece of pasteboard, which is used to guide the scalpel. Owing to the contraction which the skin suffers both in breadth and length as soon as it is raised from its natural place, the flap requires to be considerably broader and longer than the wound into which it is to be received. Fricke says it should be one line broader and longer, but this would not be sufficient. At the same time, by applying numerous stitches as close as possible to the edges of the wound and of the flap, the latter may be extended considerably after it is adjusted to its new situation, and by employing pretty thick compresses and a double-headed roller it may be prevented from shrinking so much as it would otherwise do.

Connell's case was a simple one, and exactly adapted for the blepharoplastic mode of cure. The difficult cases are those in which the tarsus is adherent to the orbit, and even drawn considerably within that cavity, in consequence of caries. The detaching of the eyelid, so as to effect the necessary replacement of it in its natural position, before cutting the flap, is, under such circumstances, no easy matter.

When a blepharoplastic operation is determined on, the thickened conjunctiva should be left untouched, and no part of the skin, neither sound, nor hardened and contracted by previous cicatrization, nor any portion of the cellular substance, should, in general, be removed. The transplantation should first of all be accomplished; and when the incisions are healed, it will rarely be found necessary to interfere with the conjunctiva, or to shorten the lid transversely by the extirpation of any part of it.

The wound resulting from the raising of the flap should be closed by bringing its edges together, and healed, if possible, by the first intention.

CONTRIBUTIONS TO ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.

Lecturer on Anatomy and Physiology, and Corresponding Member of the French Academy of Medicine.

[Continued from p. 145.]

Supplementary Observations to the preceding Memoir: describing more minutely the Anatomical Preparations illustrating the Anatomy of the Cervical Ribs.

To avoid overloading the text with minute anatomical details, I have thought it best to throw into the form

of a supplement a number of anatomical facts connected with the series of preparations, of most of which I have given figures. These details may be of use to some future anatomist who purposes completing the history of the cervical ribs in man. The reader will do well to have the figures before him whilst perusing this supplement.

Figs. 2 and 3.—A figure of an anatomical preparation precisely similar to this is given in Sandifort's great work in the Museum of Leyden. He describes it as "the first rib with a double head." Sandifort's work was published in 1792, or thereabouts, thus showing that the philosophy of M. Hainauld had not penetrated into Holland. M. Hainauld wrote in 1740, and fifty years thereafter we find Sandiford totally ignorant seemingly of what he was describing.

The cervical rib is not quite so strong in the head, neck, and tubercle, as the first true or thoracic rib: still it is very fully developed, and the head and tubercle must have rested on distinct articular facets on the body and transverse process of the seventh cervical vertebra.

The two ribs unite about half an inch beyond the tubercle, and continue united throughout: the cervical rib extends no farther than the process of insertion of the scalenus, which it seems to form. It is quite possible that the sternal end of the rib may occasionally be developed, and not the vertebral end. These bones are well ossified, quite adult, and firm; the head of the cervical rib must have rested on the middle of the body of the last cervical vertebra and that of the first true rib, between the seventh cervical and first dorsal: this fact I have now observed several times, and it establishes a curious analogy between this cervical rib as to its articulation with the column and the false ribs, the eleventh and twelfth, shewing resemblances between the two extremes of the dorsal part of the column and the adjoining regions.

Fig. 14.—In this figure I have not thought it necessary to give more than the last cervical vertebra, the first true rib, and four or five of the uppermost dorsal vertebræ; but in the preparation all the cervical vertebræ are present; it completely settles the question against Meckel's theory of the formation of the ribs, and is valuable in many other respects, as it connects Hainauld's views, filling up the gap in his observations. I beg leave to refer the reader for a very full description to the body of the memoir.

Figures 15, 16, and 17.—The preparation from which these figures have been taken has been very fully described in the text; there are present the 5th, 6th, and 7th cervical vertebræ, and the 1st, 2d, 3d, and 4th dorsal. The texture of all the bones throughout is firm and well developed. The resemblance which the 7th cervical vertebra has on the right side to the dorsal is most remarkable, and it deceived many good anatomists; whilst in the left half it is quite a *cervical* vertebra. Notwithstanding this so near approach, the vertebra even on the right side may be distinguished from the dorsal: 1st. The transverse process, although it has a distinct articular facet, is not on the same plane as those of the dorsal, holding an intermediate position between the sixth cervical and first dorsal. 2d. Between the neck of the rib posteriorly and the transverse process (which here of course has only one root), the space left assumes a *rounded* form, differing from the form of the corresponding spaces lower down, and more resembling the normal vertebral foramen, if the process had had the anterior root, which, however, is wanting. 3d. The body of the vertebra presents on each side upon its *upper surface a well marked ascending* process, characteristic of the cervical, and wanting in the dorsal vertebræ. *This process* is present on both sides; the *first dorsal* vertebra shews a little of it on the left side. 4th. On the left side there is merely a transverse process formed, as usual of two roots, and a distinct foramen between them: no vestige of a cervical rib is visible. It is worth remarking that the transverse process of the seventh *follows* always a direction peculiar to itself, intermediate of the one above, and of that following. The preparation is from the adult; the osseous texture is firm and quite healthy. Lastly, there is a slight projection upon the inner margin of the first true rib, although the scalenus was not attached to it. There was of course an additional pair of intercostal muscles, though on one side only.

Fig. 18.—It is curious to observe in this preparation how nearly symme-

trical the seventh cervical vertebra is here in parts which are anormal. The *two* supernumerary ribs, for there were two, resembled each other strictly; on each side of the body of the vertebra about its middle there is an ariticular facet; each transverse process has also an articular surface, and neither has a vestige of the *anterior* root of the transverse process. But for the *ascending processes* of the body, it might easily be mistaken for a dorsal vertebra.

Fig. 19. — The preparation from which this was taken is composed of all the cervical vertebræ, and the 1st, 2d, and 3d dorsal. The spine has been fully developed, and is adult. The seventh cervical alone presents peculiarities worth noticing here. The anormal structures are again in this preparation tolerably symmetrical. On the right side, the anterior root of the transverse process, and the rudimentary rib, have run together, both having been very imperfectly developed at first. A foramen of the usual form is thus left passing through the base of the transverse process so formed; but external to this we find *another* foramen, the rudimentary rib, having seemingly acquired strength; the rib, bent, runs outwards and forwards for about an inch, and gradually ceases in a sharp point, turned forwards and inwards. On the left side it is much the same, but instead of *two foraminæ* there is but one narrow elongated. The first dorsal carries distinct ascending processes on its body.

Fig. 13.—This preparation confirms many of the preceding statements, and offers also some new facts. Although the right cervical rib is much shorter than the left, what there is of it is quite as well developed as that of the opposite side. The vertebral artery may be seen entering the foramen of the sixth vertebra on the right and left sides: the whole of the bones are large and strong, and quite adult. As usual the supernumerary ribs are carried solely by distinct facets upon the body and processes of the seventh cervical vertebra; the true or first thoracic rib rests on two vertebræ, and the intermediate fibro-cartilage.

On the Cervical Vertebræ of the Aï, (Three-toed Sloth: B. Trid., L.*)*

The fifth volume of M. de Blainville's splendid work on Comparative Osteography contains a dissertation on a point in the history of the cervical vertebræ and cervical ribs of mammals intimately connected with the preceding observations. The aï or three-toed sloth is well known to present an anomaly in the number of its cervical vertebræ; and as M. de Blainville's work is scarce in Britain, I have thought it might be interesting to those who take an interest in the philosophic history of the human skeleton, to have this opportunity of comparing his remarks with mine, drawn as they are from human structure only. The following is a translation of M. de Blainville's note :—

"I have already said, at page 22, that I do not adopt the opinion of Bell, who thinks that those vertebræ (eighth and ninth cervical), which exceed the seventh in the neck of the ai, ought to be considered as thoracic or dorsal. I purpose in this note assigning my reasons for holding an opposite opinion, dwelling for an instant also on the fact of the number and nature of these vertebræ, which in the three-toed sloth exceed by one or two the number seven, the number found constantly not merely in man, but in all the mammalia as yet described, as well as in the unan or two-toed sloth; in all the species, however, they may approach or be removed from the human species; whatever, moreover, be the length of the neck, whether, as in the giraffe, the neck be as long as the body, or from its extreme shortness it seems wanting, as in the lamentins and dolphins.

"Although the generalization of the fact that in all the mammalia there are but seven cervical vertebræ, be in the most positive manner ascribed to Daubenton by Cuvier, (and that he had observed the fact seems probable from the circumstance of his having counted and minutely measured most parts of the skeletons of many mammals), I yet find that his generalization was first distinctly stated by Blumenbach, in his Descriptive History of the Bones, a work published in German, at Göttingen in 1786: his expressions are, "it appears that the presence of seven cervical vertebræ only ought to be viewed as a general and constant rule in all the mammalia, at least in those with four feet;" and Vicq d'Azyr, in his Traité d'Anatomie, t. i, p. 30, published the same year, states the

same generalization still more distinctly, without alluding in the slightest manner to Daubenton, although constantly in the practice of doing so. In fact, I do not believe that Daubenton mentioned this fact in his lectures at the normal school.

"In respect to the exception to the law which we find in the aï, it may be observed that it might have been suspected, from a coarse drawing of this sloth given by Pison, or rather by Margrave, in his Medic. Utriusque Indiæ, p. 322; but this did not happen. It is remarkable that Daubenton, in his comparative description of the skeleton of the unan and aï, in the "Histoire Naturelle de Buffon," has detailed very exactly the number of dorsal, lumbar, sacral, and coccygeal vertebræ of these animals, and, against his usual practice, has taken no notice whatever of the cervical vertebræ, although, notwithstanding that the skeletons were those of young animals, they were just as easy to count as the others. Thus, in 1765, the year of Daubenton's publication, the anomaly had not been pointed out: and as, in 1786, Vicq d'Azyr says that all mammals have seven cervical vertebræ, the exception had not been pointed out in the interval. Neither Riche nor Sylvestre noticed the fact in their analyses of the Transactions of the Philomatic Society made between the years 1799 and 1800; and still, although in the "Tableau Methodique des Animaux" published by M. Cuvier at the commencement of 1798, we find the unqualified assertion of Vic d'Azyr, that the mammals have without exception but seven cervical vertebræ, the "Leçons d'Anatomie Comparée, published two years afterwards, that is, in 1800, distinctly takes notice of the exception in the following terms, t. i. p. 154:—"Excepte dans le paresseux à trois doigts, qui en a neuf."

It would seem, then, that the anomaly had been observed in this short interval, and published, no doubt by Wiedemann, in his first fasciculus of vol. 1 of his Archives de Zoologie et de Zootomie; since M. Cuvier, in the first edition of his "Memoir sur l'Osteologie des Paresseux," says, "that since the time of Daubenton, M. Wiedemann, professor at Brunswick, has made researches on this subject, and has published a detailed description of the cranium of the aï (Archiv. de Zool. et Zootom. t. i. fasc. i. p. 46, with figures, plates i. and ii.); also another more abridged description of the young skeleton (ibid. p. 132,) without figures, and some additional remarks made in the Parisian museum, as well on the skeleton of the adult aï, as on the cranium of the unan, ibid. t. iii. fasc. i. p. 57;" and in the second memoir in 1823, M. Cuvier adds, whilst speaking of the peculiarity of nine cervical vertebræ in the aï (tom. iv. p. 82); that "M. Wiedemann had made the same observation independent of a knowledge of M. Cuvier's discovery."

M. Cuvier's discovery was in fact developed in the first edition of the memoir just cited, and which was published in 1804; but still it is reasonable to believe that although he had not published it, M. G. Cuvier had made the discovery prior to Wiedemann, inasmuch as he says, in this very memoir, that he had mentioned the fact some years before to Daubenton. Now Daubenton died in 1800, after the first sitting of the conservative senate, in which he had been enrolled by Napoleon Bonaparte, and "some years before," would indicate at least 1798. In fact, M. Cuvier, in his second edition of his memoir, repeats what he had in the first, viz. that he hastened to publish the fact in the Bulletin des Sciences of the Philomatic Society. Unfortunately this assertion rests on no express quotation, and this no doubt has been the cause of its having escaped the observation of those who have inquired into this point of natural history; but it nevertheless actually exists in the "Bulletin par la Societé Philomatique," about 1798, in these terms: "Citizen Cuvier here made mention cursorily of an interesting discovery he had made, that the aï, B. Tridactyl., *L.* has uniformly nine cervical vertebræ; to which he added, that this is the first exception to the law laid down by C. Daubenton, that all viviparous quadrupeds have neither more nor less than seven cervical vertebræ."

In his memoir of the osteology of the sloth, M. G. Cuvier enters into more details explanatory of the circumstances which led to the discovery. His assistant, the elder M. Rousseau, having been directed by him to set up a complete skeleton, but of detached or separate bones which M. Richard had had the kindness to lend him, and com-

mencing as is always the case by endeavouring to adjust and arrange the different vertebræ by regions, found that after having arranged the coccygeal, sacral, lumbar, and dorsal, there still remained nine, which he was obligated to consider as cervical, M. Richard having most certainly prepared only a single skeleton. M. Cuvier having been informed of this circumstance, which after all might prove merely an individual variety or anomaly, endeavoured immediately to set the question at rest by causing to be prepared under his inspection the skeleton of a young specimen preserved in spirits of wine, and by a more attentive examination of the individual specimen described by Daubenton. Now in both he found precisely the same number of vertebræ. Now this observation of M. Cuvier was published in the Bulletin of the Philomatic Society towards the middle of 1798, whilst Wiedemann published only in 1800. It is surprising therefore, that the latter, who had examined the Parisian museum, makes no mention of Cuvier's discovery, actually announced two years previously.

However this may be respecting the discovery of a fact which could not possibly have escaped notice from the period that the separate bones of a carefully prepared skeleton were about to be articulated, the subject was viewed perhaps for the first time scientifically by Mr. Bell, in a dissertation read by him to the Zoological Society of London, and published, with figures, in their Transactions. Dr. Harlan had, however, previously remarked, that the ninth cervical vertebra supported at the extremity of its transverse process an osseous rudiment of a rib, to which it is joined by a cartilage. To this Mr. Bell added, that the eighth cervical vertebra also carries, at the extremity of its transverse process, an osseous element evidently diarthrodial, that is to say, separated from the vertebra by a solution of continuity with an articular facet encrusted slightly with cartilage, and a synovial membrane partaking of slight motion, notwithstanding the density of the periosteal system; and on this Mr. Bell has advanced the opinion, that these moveable processes ought to be regarded as rudimentary ribs. Hence he thinks that these pretended cervical vertebræ ought to be considered as dorsal or thoracic, and that thus the generalization of Daubenton (Blumenbach?) would suffer no exception.

There can be no doubt of the correctness of Dr. Harlan's discovery or observation, viz. that epiphysis is for a fleeting period articulated to the extremity of the transverse process of the eighth and ninth cervical vertebræ of the aï; it may, if examined with care, be seen in the skeleton of the adult; but it appears that an anchylosis, or bony union, takes place very early, and in three specimens I have examined the eighth cervical vertebra carried no such process, whilst those found on the ninth were not only much shorter than those seen by Bell, but were perfectly regular and symmetrical on each side; and hence it would appear that there was something anomalous or irregular in his specimen. However this may be, this is not the important question, which rather is, are these processes rudimentary ribs or not? And are the vertebræ carrying them to be viewed as cervical or dorsal? And have the sloths only seven cervical vertebræ, like all other mammals? Now this we shall hardly admit.

Dr. Harlan read his Observations on the Anatomy of the Sloth Aï, to the Academy of Natural Science in Philadelphia, several months before their publication in the Monthly Journal of Geology and Natural History. He seems to have had chiefly in view to disprove the theories of Buffon, and to prove the organization of the sloth to be perfectly in harmony with its providential destination*; a thesis afterwards adopted by M. Buckland, and defended in a special dissertation†, republishing the results in his "Theology of Mineralogy and of Geology", vol. i. p. 141. But, in addition, Dr. Harlan, in his "Medical and Physical Researches," Jan. 1835, touched the question we now consider, in a note added to the reprint of his original memoir. In this note he says that several anatomists having viewed these processes articulated with the two last cervical vertebræ of the sloth as ribs, he entertains, however, a different

* We venture to assert, that no other animal is so perfectly adapted by its peculiar organization for such a mode of life.—*Harlan.*

† On the Adaptation of the Structure of the Sloths to their peculiar mode of Life.—Linn. Soc. Trans. 1833, vol. xviii. 1st part, p. 17.

opinion, because these processes are mere rudiments, and that the vertebræ themselves are complete—reasons which unquestionably are not at all conclusive, but which, notwithstanding, may be strengthened.

First, I do not see how these processes can be compared with, or considered as, rudimentary ribs: in fact, were we to compare them with the anterior asternal ribs in birds and in certain reptiles, we should find the comparison inappropriate, since they are neither bifurcated at the root, nor articulated with the body of the vertebra. On the other hand, were an attempt made to compare them with certain asternal ribs in the cetacea, the mode of articulation is an obstacle to the correctness of the comparison. And, moreover, these asternal ribs in the cetacea are always fully connected with two intercostal muscles, whilst the articular processes of the last cervical vertebræ in the aï, like the corresponding transverse process, give attachment merely to the termination of the scaleni muscles, as in all other mammals.

But the fact which most deserves attention is, that these vertebræ have the most essential, the most distinctive character of the two last cervical vertebræ—that even which enables us to recognise them in reptiles the most ophidian in their character: the eighth has, in fact, at the base of its transverse process, a foramen for the passage of the vertebral artery and great sympathetic, and besides, this process is divided into two lobes, an inferior, larger and broader, a superior, narrower but enlarged, as we find takes place in the corresponding vertebra (sixth) in other mammals, in some of which, unless I am deceived, I have observed, since my attention was more particularly directed to this point, there exists a sort of distinct epiphysis on this same vertebra. Now the ninth, that is to say, the last cervical, is equally distinguished as its corresponding bone (the seventh) in other mammals, by the absence of the foramen at the base of this same process, as well as by its form, which is long and narrow, so that this consideration alone is sufficient to demonstrate that these vertebræ, being evidently the bones analogous to the two last cervical (6th and 7th of other mammals) cannot be considered as thoracic, excluding them thus from the cervical region; and that the supernumerary or additional cervical vertebræ necessarily belong to, and ought to be placed amongst, those I have called "intermediate cervical," in my *Osteographie*.

An evident proof of the correctness of this view is found in the skeleton of the aï brought from Brazil by MM. Quoy and Guimard; in it there are but eight cervical vertebræ, and yet the two last are absolutely like the two last of those specimens which have nine. The diminution, then, in the total number is connected with, or falls on the intermediate ones, which in this case are in fact but four.

The same reasoning applies strictly to the unan, in which there have never been found more than the normal number of seven. The two first, like the two last, have always their distinctive characters, and in it, as in all the other mammals, there are but three intermediate cervical vertebræ; and I may, by the way, venture to add, that when in certain animals there is an appearance as if there were but six cervical vertebræ, it will be found that the absent vertebra is an intermediate one; but there always remain traces, either in the body, the process-bearing arch having disappeared, or in the arch, the body having disappeared. Of the correctness of this view I have satisfied myself by an inspection of a carefully prepared skeleton of the dugong, belonging to the museum at Leyden, and in which the osseous arch (of one of the intermediate cervical vertebræ, it is presumed, K.) exists without the body; and this explains the condition of our skeletons of the lamantin, in which there exist only six cervical vertebræ, because in preparing by boiling, and articulating these skeletons, the rudimentary portions were detached and lost."

In conclusion, then, I venture to suggest, that if we are to support the theory, that the eighth and ninth vertebræ of the three-toed sloth (counting from the atlas) are not cervical, but dorsal vertebræ, in consequence of their carrying rudimentary ribs, supposing the processes they do carry to be rudimentary ribs, then the nomenclature of the human osteology must be altered, and man removed from the list of mammals in whom the number of the cervical vertebræ is normal: but I feel

disposed to give a preference to the theory of M. de Blainville, which, by arranging the cervical vertebræ into three or more groups, admits of an increase or decrease in their number, without the violation of any other well-established philosophic theory.

MR. LEE
ON
BELGIAN MEDICAL INSTITUTIONS.

[Continued from p. 148.]

Colony of Insane at Gheel.

We now come, continues Dr. Moreau, to the consideration of the treatment. The therapeutical part of mental diseases, which, in some respects, is analogous with that of all other diseases, requires besides, as an essential condition of success, a combination of hygienic circumstances, for which the colony is admirably adapted, and of which science has proved the necessity.

And, in the first place, as far as regards isolation. Should not this be the first step in the treatment of mental diseases? To isolate an insane patient is to completely break the habits amidst which his alienation has arisen; it is to separate him from the localities, the things, the persons, which are not dissociated from the disorder of his faculties: it is to destroy forcibly the ordinary association of his ideas, and to give them a new direction: it is to alter the vicious tendency of his affections: in a word, to create for him an entirely new moral existence. At Gheel, all these conditions are fulfilled. The place in which the patient lives, the individuals with whom he has daily relations, the labour, the mental diversion, are all new to him. He is not separated from all society, and he cannot fail to find, in that of which he has become a member, impressions capable of producing the most beneficial change in his morbid ideas.

All the insane at Gheel, men and women, unless prevented by some physical cause, must engage in manual occupation. That of working in the country is chiefly preferred, and it is particularly suited to the insane, inasmuch as the muscles are thereby exercised; it requires but little attention, no intellectual effort, and is performed in the fields in the open air. Pinel required, for the insane, varied bodily exercise, a spacious locality planted with trees, measures of enjoyment, and the tranquillity of country habits. In the Hospice of Bicetre, I can every day perceive the beneficial influence which field-labour exercises upon the health of our patients. By creating the farm of St. Ann's, in which more than sixty patients are occupied in different kinds of work, M. Ferrus rendered a true service to humanity and to science.

The labours with which the patients at Gheel are occupied, the simple and frugal fare, the salubrious air of the country, contribute to their physical well-being. It is impossible not to be struck with the healthy aspect and fine condition of those met with in the streets, and in the country. They attain, in general, an advanced age. There are, at the present time, in the colony, some individuals between 80 and 90 years of age.

It must be admitted that there is much to be desired as regards the medical service. The colony is divided into four sections, confided to the same number of medical men, who reside in the village, and also undertake private practice. Their annual salary is but 200 francs. With so inadequate a compensation, it is scarcely to be expected that they can attend properly to the patients, and that they would not sacrifice their interests for the advantages of a much more lucrative practice.

The patients are, on their arrival, inscribed upon a register. After minute examination of the causes which have produced the disease, its duration, the treatment previously adopted, and all which relates to the new-comer, the physician is required to decide upon the curability or incurability of the patient, to fix the class, and place him in the position most conformable to the treatment, according to the nature of the predominating ideas.

This register is a rich collection of cases, of which, at the end of each year, a statistical account is rendered, and which, as regards the administration of the colony, and especially for science, is a precious document.

At the end of each year a general and medical report is made upon the state of the colony. The mode of treatment pursued at Gheel, is, with some slight differences, the same in

the four districts. It is that which Pinel and Esquirol have transmitted to us, and which is employed in all the insane establishments of Europe: viz. a pure medical eccletism, tending to combat the functional disorders which precede or accompany the intellectual disturbance. General and partial baths, the general and local abstraction of blood, purgatives, excitories, &c. form the basis of this medication. Affusions of cold water are likewise frequently employed. The douche, or a strong column of water falling upon the head, is unknown at Gheel. As a plain therapeutical means, it may very well be superseded by cold water applications or affusions—for the object is solely to produce upon the surface an impression of cold of a greater or less duration, to allay, by means of this impression, the inflammatory excitement, the occurrence of which in the brain is admitted.

A restricted diet may be advantageously made to supersede the douche. Its action is continuous, each hour that it is prolonged renders it more unendurable to the patient, especially as they have generally good appetites. Besides, by diminishing the physical forces it gradually weakens the moral energy, and in the end overcomes the most obstinate will.

Sedatives are likewise an excellent means of calming the habitual agitation of maniacs, and the temporary exaltation of monomaniacs (opium, stramonium, belladonna, hyoscyamus, aconite, &c.) The employment of those agents ought to be graduated in such a manner that, beginning with a very low dose, one may arrive at very large doses varying according to the nature of the patient's delirium, constitution, or idiosyncracy.

From what has been said, it seems to me that by giving up the douche we should not be deprived of all means of repressing the exaltation of maniacs. The douche should therefore be proscribed, because it is painful, and is equivalent to an actual torture for some patients; because it fails in most of the cases in which it is administered, or rather inflicted; because as regards the two-fold point of view as a therapeutical and repressive means, it may be advantageously superseded; and likewise, for a reason to which it is necessary to direct the attention in a special manner.

Insanity is the expression of a lesion of the nervous system, just as dyspnœa, palpitations, diarrhœa, are the expression of an affection of the respiratory organs, the heart, and the intestines: in a *philosophical* as well as in a medical point of view it is this, and nothing more. We must, however, admit that disorder of the intellect has the sad privilege over other functions of the economy, that of humiliating in their own eyes, as well as in the eyes of others, those who have the misfortune to be afflicted with it. We may conceive this idea of degradation, the moral debasement, the feeling of shame which the disorder of our highest faculties carries along with it. If this be the case, is it not the duty of the physician to calm as much as possible so painful a feeling? which, it is not sufficiently considered, is always aggravated, and is rendered more poignant and durable by the douche. Hence the excessive repugnance of patients to the douche, which begins by wounding their self-love, before making them suffer physically. When restored to society, patients remember with terror their having been douched, and this painful remembrance has often the effect of causing their relapse, or at least of powerfully contributing to it.

Let us return from this digression, to our colony. The following is the result of the treatment, as far as the cures are concerned, for the year 1840. On a total of 678 patients (353 men, 325 women) 40 (15 men, 25 women) were cured.

This number, so small with reference to the numerical quantity, is enormous as regards the *quality*, if I may so express myself, of the patients. For it must not be forgotten, that up to this day, with very few, if any exceptions, there have only been sent to Gheel insane persons who had previously been subjected to a treatment more or less prolonged; either in hospitals, or in their families, and had been deemed beyond the resources of art, and declared *incurable*. I am well aware that in mental medicine the prognosis is far from being infallible; but when a disease has existed for several months, or even years, and no treatment has succeeded in modifying

it, the prognosis is excessively unfavourable, even if it does not induce us to give up all hopes of recovery. Besides, the circumstance must not be overlooked, that, among the patients at Gheel, there is a considerable number of paralytics, epileptics, idiots, and imbeciles, who are all in a state of absolute incurability.

As I have already said, not more than two years have elapsed since the colony at Gheel has received a certain organization. No doubt with time (if this be allowed it), this organization will produce the fruits there is reason to expect from it, especially if the ameliorations be introduced of which experience may subsequently demonstrate the necessity.

SINGULAR CASE OF MALFORMATION OF THE SEXUAL ORGANS:

WITH ABSENCE OF THE URETHRA.

To the Editor of the Medical Gazette.

SIR,

I TAKE the liberty to transmit the following case, which I hope may be thought worthy of the attention of the profession.—I am, sir,

Your obedient servant,

E. SMITH, M.B.

71, Newhall Street, Birmingham,
Oct. 31, 1843.

On Sept. 13th, 1843, Mrs. Tinly, of Constitution Hill, was delivered of an infant having malformation of the sexual organs.

The perinæum was about 1½ inches in length, having the precise characters of this organ in the male. At its anterior termination, and within five lines of the arch of the pubis, was a triangular-shaped opening, the apex being above and in front. Through this opening the urine was emitted; and along the canal terminating there, a small bent probe could be readily passed into the bladder. There could, consequently, be no doubt of its being the urethra.

In the central part of the perinæum, and about midway betwixt the urethral opening and the anus, was a slight elongated depression, having a faint blue tint shining through the skin.

In front of the arch of the pubis was an elongated cylindrical body, having the precise appearance in position, form, and resistance, of a penis with the prepuce withdrawn. A substance similar to the glans penis was very evident, in the centre of which was an elongated fissure; no orifice of a urethra could, however, be detected in it. This penis was nearly one inch in length, and was curved downwards, being connected by the frænum preputii with the central line of the perineum. This connection was immediateiy above the urethral opening, with which opening the fissure in the glans penis would be continuous, were it not for the transverse connecting point just mentioned.

On either side of this penis an oval flattened organ was placed, measuring twelve lines in length and eight lines in breadth. In form, position, colour, and striated appearance of the integument, it nearly resembled the scrotum. It differed from that organ, however, by the two sides being separate and distinct. In the space betwixt these two sides of a scrotum the penis was situated.

Neither testes nor spermatic cord could be felt.

It now became difficult to ascertain whether these organs belonged to a male or a female child. The appearance was that of a male, since we had a body much resembling a penis, two organs analogous to the scrotum, and a urethral opening at the base of the penis. The non-perforated character of the penis did not militate against such conclusion, since such circumstance has been frequently found in individuals whose sex was certainly the male. The same remark also applies to the want of testes in the scrotum, inasmuch as many individuals have reached manhood before the testes had gained their proper position. The opening of the urethra, although abnormal, seemed to assist us in our conclusion, from its absolute position being so like that of the female, and from its relative position with regard to the base of the penis. We could not consider it to be female, because we had not the external fissure bounded by the external labia, nor the nymphæ, with any of the more internal of the external organs of generation. The scrotum-like bodies might be transformed labia, but their appearance did not admit of such

a conclusion; and the penis-like body might be an enlarged clitoris. The *tout-ensemble* was apparently that of a male child.

On the following day, Mr. Green and Mr. Thomas Chavasse, two highly talented surgeons, examined the child, and unhesitatingly pronounced it to be a male.

During the succeeding five or six weeks the infant was very restless and irritable, and became gradually emaciated. A considerable quantity of opaque mucus was discharged by the urethral passage. On October 30th it died, and a *post-mortem* examination was made the same day; when the following unexpected and unusual circumstances presented themselves :—

A normal and well-developed uterus, with its fallopian tubes and ovaries, were present. The canal leading from the external urethral opening was the vagina, about two lines in diameter, and perfectly cylindrical and patent. There was no urethra, but the neck of the bladder was inserted into the vagina: that this passage was the vagina, although not perfectly normal, is evident from the following circumstances. 1st, The direct course of the canal was to the uterus; the bladder being connected with it at an obtuse angle. 2d, The structure of its walls was that of the vagina, consisting of a mucous membrane, a dense layer of fibrous structure, and condensed cellular membrane. This structure was continued beyond the insertion of the bladder, even to the neck of the uterus. The anormal part of the urethra was its not terminating by a cylindrical opening, around which the fibres of the vaginal muscle might be located. The above-mentioned structure, also, did not proceed to the termination of the canal, but only the most internal twelve lines. The external eight lines were composed of mucous membrane and cellular structure only. But although the lower part of the canal bore some resemblance to the urethra, yet the circumstances above named will probably prove it to have been the vagina.

No testes nor spermatic cord could be discovered. The labia consisted of a portion of integument and cellular tissue folded upon itself; the two layers being very readily separated from each other.

This case appears to be interesting for three reasons. 1st, The great similarity of the external parts to the male organs of generation, which was infinitely greater than is usually observed in anormal conditions of the female organs. 2dly, The character of the canal, consisting of vagina with urethral termination—the termination also being anormal—and more especially from the direct insertion of the bladder into the vagina, causing the absence of the urethra. And, 3dly, It is illustrative of the observation made by Geoffry St. Hilaire, that the organs of both sexes were originally formed on the same plan. It also shows how purely speculative must be the opinion of medical men in such anormal cases.

ON THE PART OF THE STOMACH WHICH DIGESTS, AND THE SOURCES OF HÆMOPTYSIS.

To the Editor of the Medical Gazette.

Sir,

It seems to me that an indifferent judge has been set to criticise my paper "on the Digestive Solution of the Œsophagus, and on the Distinct Properties of the two ends of the Stomach*." I crave leave to appeal to you.

I attempt to shew that the left end of the stomach is the digesting organ, and that therefore this part alone is digested after death. The critic thinks that all the fluid gravitates to this part as the corpse lies, and so digestion is manifested here. He says, "We have seen much of morbid anatomy," but he does not seem to know that the part of the stomach filled by gravitation (as above) is not the part most acted on by gastric juice. The perforations, &c., do not occur behind, but at the left side†. This, his evident want of obser-

* Vide Guy's Hospital Reports, 1842 and 1843; and No. 32 of the British and Foreign Medical Review.

† The same thing, as near as may be, occurs in all sorts of fishes who are not laid out very regularly on their backs to die. Hunter's words are, at the "usual place," the "great extremity," the "great end," solution occurs. He says of the dog's stomach, "In the great end, the food will be but little altered (it is wiped away to the right as it is digested) towards the middle more, &c." I have stated, the least altered part of a solid meal is the centre of the mass. Hunter, again, "There are few stomachs that do not shew, when examined after death, some of the

vation, may explain his objection to my statistical assurance that some "effects of digestion are as often discoverable as not" in London autopsies. Those who know how to look for the signs will not fail to find them.

With regard to the originality of my view the critic may do very well for hunting up forgotten expressions, but he is not honest in the following:—"The remainder of the paper is occupied with a series of observations in support of the *opinion* that the left half of the stomach is alone concerned in the production of the digestive fluid. After noticing the testimony of various authors to this *fact*," &c. now, as to facts, and opinions against me, I do quote various authors, but as to the *new opinion* I have only shewn an obscure hint from Dr. Philip, somewhat enforced by Dr. Elliotson.

After reading my paper, the critic found it safe to say for himself, that "solutions of the œsophagus are also common," but in a subsequent criticism I find M. Louis, and the reviewer after him, equally at fault in this very matter. In phthisis, the œsophagus is found "pretty frequently coated with pultaceous exudation—a condition not productive of any particular symptoms." This is merely a dissolving of the cuticle *after death*.

I should now, sir, have done, but that I catch another evidence of glaring fault, the like of which will, I conceive, ever attach to the pernicious system of anonymous criticism in science: I mean the assumption by the critic of as much of the author as the critic thinks creditable to himself. After M. Louis, he says, "so singularly rare is it to detect a ruptured vessel in the interior of the lung." I conclude that, occupied with counting other points, M. Louis has not seen as he might have seen, and that the critic is as little informed as many other literary folks as to the real fact. The sudden copious hæmoptysis in the last stages of phthisis is from a visible ulceration of a large blood-vessel, usually attended with aneurismal clot in a vomica—See Guy's Museum. The red streak of purulent expectoration is ulcerated bronchus. The vicarious hæmoptysis of females is whatever the critic likes. The hæmoptysis of incipient phthisis, with general wasting, is abrasion of the vascular surface of the larynx. If the critic ask for proof, I reply in his own words, "as far as our observations extend, we feel convinced*." I suppose I have as much right to say so as one without a name.—I am, sir,

Your obedient servant,

T. Wilkinson King.

36, Bedford Square,
Oct. 28, 1843.

inner villous coat destroyed, which may have been done by the gastric juice in the ducts of the glands which secrete it." Again, "there are very few dead bodies in which the stomach, at its great end, is not in some degree digested; and one who is acquainted with dissections can easily trace these gradations." Hunter has some remarks which seem to weaken the force of what I have quoted, but a just observer may discriminate for himself, and Hunter does not spare the blunders of the unobservant in these very matters.

* The case in which the critic does "feel convinced" he may, perhaps, some day explain to us. It relates to the influence of the nerves on digestion. My view of the matter may possibly be of some help to him. The nerves are certainly for feeling and for motion. Distension, motion, and a good vascular supply, are necessary for secretion and digestion. After this, who shall first say, what? I wish the critic better than convinced. In writing hastily, I have had no intention of writing offensively of one whom I do not know. Could a critic be softened, I might implore my "*old friend*," as he seems to style himself, to revise his judgments of the safety-valve, the venous pulse, the humoralism of hernia, the use of the thyroid body, the rapid flow of lymph, diseases variable, &c. &c. If my doctrines prove just, the same term will not apply to the reviewer of them. And so I ask his pardon.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le ecteur tue à abréger."—D'Alembert.

Medico-Chirurgical Transactions, published by the Royal Medical and Chirurgical Society of London. 2d. Series. Vol. VIII. Longman and Co. 1843.

[Continued from page 156.]

Case of Ulceration of the Internal Jugular Vein, communicating with an Abscess. By William Bloxam, Esq. Communicated by Samuel Lane, Esq.

This is an interesting and curious case. A child, four years of age, was affected with scarlet fever. On the decline of the eruption, one of the glands of the neck became inflamed, and suppurated. After the abscess had been open for five days, blood began to show itself in the discharge. At first it was small in

quantity, but gradually became more copious, and of a venous character. The abscess was plugged with lymph, and pressure applied to restrain the bleeding. The child became irritable, and the hæmorrhage, which had at first been controled, returned; and the child died on the fifth day.

On examination after death, the internal jugular vein was divided some way down the neck; and, "on passing a probe upward to the abscess, an ulceration of an oblong shape, of about five lines in its long axis, was observed in the inner side of the internal jugular vein, opening immediately into the sac of the abscess."

Some Account of an Hysterical Affection of the Vocal Apparatus, with several cases. By Oscar Clayton, Esq.

Seventeen cases have occurred to Mr. Clayton, in two groups; the first commencing in February 1841, and the second in October 1842. The subjects of them (children in a charitable institution) were attacked "with a short and almost constant hacking cough, with much pain and distress in breathing, but no expectoration; quick pulse, hot skin, white tongue, and costive bowels. After two or three weeks, during which time these symptoms withstood all the remedies applied, the cough changed to sounds varying in the different patients; in some, resembling the double action of a large saw; in two, a shrill screaming expiration, following a quick catching inspiratory effort, much resembling the cry of a peacock; in another, the sound was such as is produced by blowing into a small metallic tube. In fact, it is difficult to conceive the dissonance and constancy of these sounds."

Blisters, sinapisms, and a variety of other remedies, were tried without effect. At last Mr. Clayton resolved on imitating Boerhave's plan at Häarlem. He had the children assembled, and gave them to know that he would apply a red-hot iron to the throat of every one who was not quite well by next morning! All, except two, ran away to their homes; but returned on the following day quite well. The two who remained continued to make the same noise as before, and were soon joined again by their companions. All other means having failed, a spatula was dipped in boiling water and applied to the throat. With most this succeeded; but in two the symptoms continued, and it was found necessary to send them home, where they soon recovered.

Case of Erectile Tumor in the Popliteal Space.—Removal. By Robert Liston, Esq. F.R.S. Surgeon to University College Hospital.

A boy, æt. 10, was admitted into University College Hospital in January 1843, under the care of Mr. Liston. He had a swelling in the right ham, which had been first observed eight years previously. It had gradually increased. A needle had been passed into it some years previously, and afterwards a seton was introduced. Various other expedients were also tried without avail.

The tumor was removed by Mr. Liston, January 6th, after two exploratory punctures; and the operation required a troublesome dissection (deep into the popliteal space), during which a considerable quantity of blood was lost.

"*Examination of the tumor.*—On making a section, the tumor was found to consist of a mass of most perfect erectile tissue as large as a hen's egg. This was completely surrounded by a condensed cellular and fatty matter. One part of the erectile tissue was more condensed than the rest, possibly where the seton had traversed it.

"*Microscopic examination of the tumor.*—Under a low power it appeared to consist of an interlacement of columns having a fibrous aspect, covered by a smooth membrane, and representing in miniature the appearance of the musculi pectinati of the auricles of the heart. Thin valvular projections of the smooth investing membrane partially closed some of the openings between the columns. Small vessels, filled with blood, were seen running in the substance of the columns. The intimate structure of these columns, examined under a higher power, was seen to consist of bundles of waved parallel filaments. The surface of the columns was covered by a delicate squamous epithelium resembling that found on the inner surface of veins. No fibres resembling those of elastic tissue could be detected."

Analogous cases would appear to be rare, especially as regards the occur-

rence of erectile tumors in muscular structures. One somewhat similar, however, occurred to Mr. Liston at the Royal Infirmary in Edinburgh, which he briefly details. The tumor was the size of a small turnip, and was situated on the left side of the neck. It was removed by operation, and the patient did well.

Two Cases of Osteosarcoma of the Thigh Bone, requiring amputation of the limb in both instances. By R. A. Frogley, Esq. of Hounslow. Communicated by Samuel Lane, Esq.

The above are two very good cases; but a sufficient idea of them is gathered from the title of the paper.

Remarks on Cancrum Oris, and the Gangrenous Erosion of the Cheek of Mr. Dease and Dr. Underwood, and more particularly on the Efficacy of the Chlorate of Potash in the Treatment of those Diseases. By Henry Hunt, M.D.

This paper contains a very good description of *cancrum oris*, and suggests what appears to be a very useful remedy.

The disease "commences by small ulcers, either on the inside of the cheek, or at the point of junction of the mucous membrane of the cheek and gums, or in the gums themselves, separating them from the teeth: they are very tender and painful, and attended with profuse salivation; the breath soon becomes tainted with an offensive smell, not unlike the mercurial fœtor: if the disease is neglected, the ulceration goes on to destroy the gums, the teeth loosen and fall out, the alveoli are laid bare; at the same time the brown ragged ulcer spreads rapidly on the inside of the cheek, the integuments over the spot corresponding to the ulcer become hard, swollen, at first white, and afterwards of a dull red colour, and shortly a black spot appears in the centre, which quickly spreads, and destroys more or less of the cheek; and if the child survive, it is sadly disfigured, and not unfrequently loses the power of opening its mouth, from the unyielding nature of the cicatrix; but more commonly, if the disease has extended its ravages to this extent, it sinks and dies."

The treatment recommended commences with a dose of rhubarb, with a little sulphate of potass and a grain of calomel; at least the above is to be given where the soreness of the mouth is not so great as to render it difficult or impossible for the child to take it. But the chief remedy is the chlorate of potass. "The quantity of the salt that I have been in the habit of prescribing varies from twenty to sixty grains, according to the age of the child, in divided doses, in twenty-four hours, dissolved in water; the beneficial effect is often observed on the following day, almost always on the second; the disagreeable fœtor soon lessens, the sores put on a healthy reparative action, the dribbling of saliva diminishes, and if there is mere ulceration it very speedily heals, if there is an eschar it soon separates, and the sore granulates kindly. In no other disease did I ever see the beneficial effects of any medicine so soon manifested, as that of the chlorate of potash in these diseases. It is sometimes advisable, indeed necessary, that the aperient should be occasionally repeated."

Several cases are then detailed in illustration, the last of which is by Mr. Cæsar Hawkins, and in keeping with the remarks previously made by Dr. Hunt.

Case of Ulceration of the Pulmonary Artery into an Abscess of the Lungs. With Remarks by John Dalrymple, Esq. By William Crowfoot, Jun. Esq. Beccles. Communicated by John Dalrymple, Esq. Surgeon to the London Ophthalmic Hospital.

This was a case of strumous disease of the left lung, attended, during life, by copious bloody expectoration. On post-mortem examination, the upper part of the left lung was found to be entirely occupied by a large cavity, containing half a pound of blood. Into this the pulmonary artery opened at the distance of two inches from its bifurcation, and by an aperture the size of a crow-quill.

Cases of Strangulated Hernia, reduced "en masse:" with Observations. By James Luke, Esq. Surgeon to the London and St. Luke's Hospitals, and Lecturer on Surgery. Communicated by Sir B. C. Brodie, Bart.

This is an interesting paper. Mr. Luke has known so many as five cases in which reduction *en masse* has taken place—that is, reduction of the whole

hernial tumor, with its investing sac, through the aperture in the abdominal parietes. By this the part continued subject to strangulation as before. In all these cases a considerable similarity of circumstances was present; thus, in all, the hernia was inguinal and oblique, and had been reduced by the patient himself. In none was the exact nature of the case known during life, or any attempt made, by operation, to relieve it; and in all there was found, on post-mortem examination, a hernial tumor in the neighbourhood of the internal ring, reduced through the abdominal parietes, but remaining external to its general peritoneal investment. The contents, in all, were in a state of sphacelus, being strictured by the neck of the sac.

The first case which occurred to Mr. Luke was in a muscular coachman, thirty years of age, who, while driving in the streets of London, experienced the descent of a hernia through the inguinal ring on the left side. He immediately pressed the tumor, when it speedily disappeared without giving him any pain. But on his return home, in about an hour, he had pain in the bowels, with sickness. Professional assistance was had recourse to, but without relief; and he was admitted into the London Hospital rather more than three days after the above occurrence.

"He was at this time suffering from severe pain in the abdomen, and great prostration of strength. The abdomen was tympanitic and tense, attended by frequent vomiting of fæcaloid matter, and obstinate costiveness, which latter had not yielded to purgatives administered in the course of the previous treatment. The pulse was weak, and the countenance pale and anxious."

It was suspected by Mr. Luke that the hernia had been reduced with its contents in a strangulated state. A consultation was held next day (August 31st), at which it was deemed prudent to abstain from any operation. Subsequently to this decision, the treatment consisted chiefly of calomel and opium: this was continued till September 4th, when Mr. Luke, who had been out of town, found his patient still alive, with the symptoms all increased. "A local indication had also now arisen, by the formation of a tumefaction along the course of the inguinal canal, which induced me instantly to propose, and perform as quickly as possible, the operation of exploration which I had before contemplated.

"An incision was made over the seat of tumefaction, from which a quantity of highly offensive sanious fluid exuded, and by the infiltration of which into the cellular texture of the part, the tumefaction had been caused.

"Continuing the incision towards the internal ring, a lustreless greenish membrane presented itself, the tense and rounded surface of which extended beyond the limits of the opening made by the operation. This was at once recognised to be hernial sac, and therefore opened.

"On examining its contents, they were found to consist of a large quantity of intestine, sphacelated and reduced to a pulpy condition, so that it gave way under the pressure of the finger, introduced for the purpose of ascertaining the seat of stricture. This latter was reached by the finger with great difficulty, in consequence of its distance from the opening of the parietes. Being reached, the finger was passed through it, and, when withdrawn, was followed by fæculent discharges, rendering further division unnecessary. A free vent for the discharges was made by enlarging the external wound, and the patient taken to bed. A bread-and-water poultice was applied over the part, and stimulants were administered by the mouth.

"Copious discharges continued to flow from the wound for two days, at the end of which he died; his death taking place on September 6th.

"The large hernial sac discovered during the operation, was brought more fully into view at the examination *post mortem*. It was found to occupy a considerable space just within the abdominal parietes in the vicinity of the internal ring. The fundus of the sac lay a little below its level, towards the cavity of the pelvis, while the neck (still contracted, so as obviously to have been the original seat of stricture) lay in an upward direction towards the umbilicus, and between three and four inches distant from the situation of the internal ring. The whole sphacelated contents were empty, collapsed, and in a pulpy state."

A second case is detailed, analogous to the preceding, but with this great

difference in the result—that Mr. Luke saved the patient's life. This was accomplished by an operation, in which the parts were freely laid open, the margin of the inner ring divided, the hernial tumor drawn down into the inguinal canal, and there opened. The stricture having been divided, the contents were easily reduced. The patient progressively recovered.

It is clear, from the history of these cases, that the too exclusive reliance on the absence of tumor externally, as demonstrating the absence of hernia, is sometimes highly dangerous; and, in doubtful cases, more security will be obtained from inquiries as to the previous existence of tumor in the part. Our author insists much on the expediency of a careful examination.

"The presence of sac, even without hernial contents, causes an abnormal fulness in the part, easily ascertainable by examination. The absence of such fulness in a part, when hernia is known to have previously descended, necessarily leads to the conclusion, that the sac upon which it depended has been displaced, and probably returned, together with the hernia.

"The sac in inguinal hernia, below the external ring, becomes united with the spermatic cord, whereby the latter is usually rendered indistinct and obscure. The absence of that indistinctness and obscurity implies the removal of the cause which previously produced them, and therefore that the sac has been displaced. The continuance of the indistinctness and obscurity leads to a directly contrary conclusion.

"When a hernia descends from the abdomen, the aperture through which it descends is always enlarged and dilated. This fact is ascertainable by the introduction of a finger—a circumstance which becomes available to the diagnosis in these cases.

"Should a large aperture be detected, a previous hernial descent may be inferred."

In making the examination immediately above the seat of the internal ring, some indications of reduction *en masse* having been had recourse to may be obtained. "Thus, it may be expected, that if such reduction has been effected, the inflammation of the hernial contents will cause a circumscribed pain in the seat which it occupies, while a fulness, or even the rounded form of the hernia deeply situated within the abdominal parietes, may possibly be cognizable upon a minute examination; yet the absence both of circumscribed pain, and of fulness or rounded form, should not lead to a negative opinion; for in the first case neither pain nor fulness existed, yet subsequently a mass of strangulated intestine was discovered at the part.

"Their presence, however, may be taken as corroborative of an affirmative opinion, founded upon the manual examination previously instituted."

Proceeding with the exploration, the inguinal canal is to be laid open, by which the nature of the case will generally be fully displayed; and where there is a hernia, the neck of the sac must be freely divided, so as to leave no impediment to the reduction of its contents. Up to this time, the exploration has been unattended with any danger of importance, and without necessarily involving any disturbance of the peritoneum. The sac, we are told, should in all instances be opened, and the neck freely divided. Care must be taken, by the introduction of the finger through the neck of the sac, to ascertain the perfect liberation of its contents after the reduction.

Observations on the Medicinal Properties of the Cannabis Sativa of India. By John Clendinning, M.D. F.R.S. Physician to the St. Marylebone Infirmary.

Dr. Clendinning is of opinion that the plant above named has powerful influence in alleviating pain, whether neuralgic, spasmodic, or inflammatory, and in procuring sleep. The dose is ηx. or xij. of the tincture, equivalent to gr. j. of the extract, gradually increased.

On the Sugar in Diabetic Blood. By Henry Bence Jones, M.A. Cantab. Licentiate of the Royal College of Physicians. Communicated by Dr. Nairne.

In 1841 Mr. Trommer proposed a new method of distinguishing between cane and grape sugar; and according to his observations, $\frac{1}{10000}$ part of grape sugar, when added to healthy blood, could be recognized. "The delicate test of M. Trommer consists in the perfect solution of the precipitate which first

forms when caustic potash is added in excess to a solution of sulphate of copper and grape sugar, and the after formation of a peculiar coloured precipitate by heating the mixture. The first part of the test is not sufficient without the second, nor the second without the first; for cane sugar will give the same clear blue solution, without giving the peculiar precipitate afterwards; and uric acid used instead of sugar, gives the same precipitate by heat, but does not give the clear solution."

An opportunity having occurred, Mr. Jones repeated the experiment on the blood in a case at St. George's Hospital. When he put 0·15 of a grain of diabetic sugar in two ounces of clear serum, he was unable, after evaporation, &c. to detect the sugar by the above test; but when he dissolved the same proportion in urine, "the test was most sufficient." From this it is inferred that it is easier to discover sugar in the urine than in the blood, in which last, though it may exist, it may not be recognized by the most delicate test.

A few Observations on Encysted Hydrocele. By Robert Liston, Esq. F.R.S. Surgeon to University College Hospital.

Mr. Liston is inclined to believe that some of the collections of fluid in the scrotum are more intimately connected with the testicle than has generally been supposed. He observes, "Some nine or ten months since, I was consulted by a healthy-looking gentleman, beyond the middle period of life, on account of tumor of the scrotum. There was plainly fluid on both sides. The largest cyst was punctured, and gave exit to some eight or ten ounces of thin fluid, which might be compared to distilled water with a little soap diffused through it. The other side of the scrotum was punctured a few months afterwards, and, as far as I can recollect, ordinary looking serum, to the extent of five or six ounces, was discharged.

"A short time since, the patient returned, to have the original cyst again emptied. About the same quantity of fluid was drawn off, and of the same quality as at first. This fluid was examined chemically, and scarcely a trace of albumen could be detected.

"On the second day, a minute quantity was put in the field of the compound microscope, and my surprise was great indeed when it appeared quite full of spermatozoa; there were, besides, to be detected some of the primitive cells, in which the spermatozoa are developed, and a certain number of mucous globules.

"It is to be regretted that the microscopic examination did not take place immediately after the fluid was obtained, so as to have ascertained whether the animalcules presented their usual liveliness of motion."

In a postscript, Mr. Liston informs us that the preceding observation has been confirmed by the examination of the fluid from a small cyst above the testicle of a man 33 years of age. The fluid here was nearly colourless, and contained numerous spermatozoa, some of which continued to move for a considerable time after the cyst was evacuated.

On the Presence of Spermatozoa in the Fluid of Hydrocele. By E. A. Lloyd, Esq. Assistant-Surgeon to St. Bartholomew's Hospital, and Surgeon to Christ's Hospital.

We introduce a notice of this paper here, though out of the regular order, because it refers to the same subject as the preceding. Mr. Lloyd also has found spermatozoa in hydrocele. Having met with one case, his attention was naturally directed to others; and he has examined the fluid drawn off in hydrocele "in about thirty cases." In two of them the fluid contained living spermatozoa.

The Spas Revisited: a Supplement to the Spas of Germany. By A. B. Granville, M.D. F.R.S. &c. &c. London, 1843. 8vo. pp. 72.

The lapse of five years has made the supplement a necessary addition of Dr. Granville's well-known work upon the Spas of Germany. The following extract will show the agreeable style in which much useful information is conveyed.

Argument in favour of mineral waters. — "My argument to prove (against the opinion of the incredulous) that there must exist certain fixed powers in mineral waters, is neither lengthy nor complicated. You I say to the unbelieving members of this country, who smile at the *bonhommie*

of such as trust to the efficacy of mineral waters — you prescribe readily enough one, two, or more saline or chemical ingredients, dissolved in some fluid or other, with the intention and expectation of producing certain useful effects on the human frame, whereby disease may be removed; and you have often the gratification of witnessing the realisation of your expectations. But the ingredients you thus employ are natural products, and the very same which we detect in mineral waters. Consequently, mineral waters must be deemed capable of producing those useful results on the human structure which your own prescriptions are found to give rise to. But, inasmuch as nature is ever superior to art, and her chemical manipulations and solutions have invariably been acknowledged to be more exquisitely, as well as delicately accomplished, than those performed by man, it follows, that mineral waters are not only as good, but must be better than man's prescriptions for the treatment of disease, if *they* hold in solution saline ingredients." (p. 516-7.)*

More than eight pages are dedicated to Baden-Baden, and its improvements.

Dining-room and hall at the Badische Hof.—"This *Speisesaal*, by the by, is a really beautifully decorated saloon, thirty feet high, newly painted *à la Vatteau*, with a profusion of arabesque festoons all round, having a music gallery over the principal entrance. From three to four hundred persons might dine in the *salle*. There is another new part of this hotel, namely, the vestibule, or entrance hall, which equally deserves notice. To those who are acquainted with the covered *atrium* of the Reform Club in London, it will be sufficient to state that this covered hall of the *Badische Hof* so resembles it, that the sight of the one necessarily reminds one of the other." (p. 526.)

Wildbad can now be reached in five days from London, and for five pounds. "The English visiter who ascends the Rhine, may now secure his passage from London to a boat-station, called Knie-lingen, up that river, recently established, whence he will reach, by an omnibus, the capital of Baden, Carlsruhe, in half an hour, and thence, by diligence or posting, get to Wildbad in the course of a few hours more." (p. 534.)

The improvements at Wildbad have been great, and have produced the desired effect.

"The influx of strangers has quintupled since I wrote in 1836, when about six or seven hundred visiters marked that season." (p. 536.)

Is heat a form of electricity?—"I cannot close this brief statement of the nature and effect of these singular waters, without adverting to a curious fact observed last year, by a patient of a philosophic turn of mind, in regard to them. It seems that, in the course of the operation consequent on the extensive alterations and improvements that are going on in the baths, the water of the *Färstenbud*, instead of being suffered to flow out of the crevices of the rock into the bath, as hitherto, was conveyed into the temporary building by iron pipes of a small diameter, and that this process sufficed to alter very materially the physical qualities of the water, and its effects on the human frame. Can such a fact bear any analogy to that still more curious fact lately observed by Faraday and others, that the vapour of hot water, when made to issue out of a narrow, or compressed, or tortuous iron pipe or orifice, is in a different state of electricity than when issuing from a wider and straight one? If so, would not the observation made by this clear-sighted patient at Wildbad go to render more than probable the theory, that heat in the Wildbad waters is electricity, and that electricity is the real powerful agent of these waters?" (p. 538.)

At Ems there is a new *Kursaal*, besides many other important changes and improvements.

Teplitz.—"Teplitz baths are the most powerful awakeners of lost energies, and disentanglers of stiff-joints, that I am acquainted with. They are of no use, nay quite the reverse, in cases which are accompanied by inflammatory action, acute pains, or spasmodic contractions. A medical man would send to Teplitz a patient suffering under rheumatic affection of some years' standing, which has crippled him, but he would not despatch thither an individual liable to be attacked by rheumatic fever. This distinction

* The paging in this supplement is a continuation of that in the second edition of the original work.

may serve as a type of the Teplitz waters." (p. 549.)

Schlangenbad water.—"The peculiar *satinizing* effect produced on the skin by this water, or, indeed, by any other in which sodaic and magnesian salts are predominant, proclaimed first by the writer of the 'Bubbles from the Brunnen,' and confirmed in my former description, has been denied by Dr. James Johnson, in his "Pilgrimage'. Let the reader put a little carbonate of soda, or of magnesia, in the warm water of his basin, when using ablution to his hands, and he will soon perceive that the two first writers had asserted a fact," &c. (p. 553.)

Wines at the Grand Monarque Hotel at Aix la Chappelle.—"While on the subject of the table at the *Grand Monarque*, I would just whisper to my readers that they will find here such specimens of foreign wines as they would look in vain for at any other hotel. Let them ask, if they are anxious to have a treat, for a bottle, first of Geisenheimer Rottenberg, 1834, *ne plus ultra*, and better than Johannisberg; next, for one of Dremel's *nonpareil*, a species of Moselle wine, cultivated on the banks of the Saar, with a peculiar *bouquet*, highly flavoured and pleasing in taste, of a fine straw-colour, called Schwatzhofberger; and lastly, as a *bonne bouche* to be quaffed in a wide and narrow tazzas, a bottle of the *Fleur de Bouzy*, one of the most recent and fashionable specimens of champagne of the day." (pp. 556-7.)

Kissingen.—Great improvements have already taken place here, and more are to be undertaken. Among others the old part of the *Kurhaus* is to be demolished.

"The present more modern part, at the back, will be enlarged and made to harmonize with the new. A splendid banqueting hall, fifty feet high, and large enough to admit of six hundred persons sitting down to dinner, will occupy one wing, with other adjoining smaller dining rooms for public or private parties." (p. 568.)

Dr. Granville resides at this watering-place for a couple of months in the summer; and in consequence of his suggestions, the water of two of the springs—the Ragotzi and the Maxbrunnen—is now imported and sold in London. The Ragotzi has been called the best saline chalybeate in Europe; but our author thinks this a very inadequate designation.

It is a first-rate remedy in dyspepsia; an excellent regulator of the catamenial secretion; and manifestly acts upon the skin. "And with all this its taste is such that it may be called a pleasant drink; for it is sharp, acidulous, from the excess of carbonic acid gas present in it, strongly saline, and gives a distinct indication of the presence of iron. So minute, however, is the quantity of the latter mineral, and so generally combined with the other saline ingredients, that though the invigorating properties of that one substance are felt, after a course of the water properly conducted, its occasional injurious and disturbing tendency in the human frame, observed in other mineral waters, has hardly ever been exhibited by the Ragotzi." (p. 564.)

The work concludes with accounts of the Spas of Homburg and Carnstadt. At the latter, half an hour's drive from Stuttgart, "a bath, with linen, &c. is charged twenty-four kreutzers, or eight pence; and the cost of a dinner at the table d'hôte is forty kreutzers, or thirteen-pence farthing!" (p. 575.)

We strongly recommend Dr. Granville's Supplement to all who are interested in the subject of which it treats.

MEDICAL GAZETTE.

Friday, November 10, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

TEACHING AND LEARNING.

DR. JOHNSON concludes a letter to a young man lately arrived at Oxford, in these words—"It is a rule never to be forgotten, that whatever strikes strongly should be described while the first impression remains fresh upon the mind." The two processes in which the mind is mainly employed are observation

and inference, and although of course the latter is performed more frequently, and more skilfully, late in life, yet it is so far from being entirely postponed to that period, that it probably comes into action immediately after the former. An oscillation between observation and inference seems to be observable in the very earliest phenomena of childhood; and long before speech has translated its sensations into words, the child has given proof of being conscious that it finds every fact of its life is either like or unlike to some other facts which have preceded it; and when the young visitor has paid us the compliment of learning a little of the language, and seeing more of our curiosities, his observations to those who accompany him through that world of which we are old inhabitants, prove how constantly his mind is vibrating between observation and inference. It has been well observed, that "children seldomer ask a plain question than suggest a difficulty;" and this renders their society so fatiguing to the ignorant and unthinking, so exciting and instructive to the reflective and the well informed. This process is, no doubt, most evident in talkative children, but it by no means follows that it is more constant or more productive in them than in the more silent; the reverse is probably the case; for speaking may be to children what writing is to adults, a toilsome process, consuming some of the attention which they have to bestow, and rendering their thoughts less copious though more accurate. The putting of ideas into words, the subjecting both their form and texture to the oral criticism of themselves and others, is, no doubt, to children a most improving exercise—the harsh repression of which, whether from mere indolence, or to prevent a habit of talking nonsense, is often highly injurious. The uncorrected observations, impressions, and false inferences of childhood and early youth are often treasured up silently in the mind; recurred to over and over again till they become confirmed, and serve as false points of departure for the mind; in the still voyage of thought, till rudely corrected by the storms and the currents, the rocks and the shoals, of active life. It is better to let children put what they do think into words: though the first attempts be rude, they will improve. The blank faces of parents and guardians on reading a schoolboy's letter, would be cheered by the reflection, that this most comically dull of all human compositions is an exponent, not of young hopeful's thoughts, but of so much of them as he can translate into the language of letter-writing, a language to him new and mystical. The real *opus diei*, the postscript, containing a suggestion about a half sovereign, or a hack-knife, will generally present a tolerably clear idea, vigorously forcing its way through all difficulties of style. A quarter of an hour in the field or the play-ground would also encourage the desponding parent, for his son's notions are then expressed in the vulgar tongue. The brilliant ideas and dexterous manipulations of a Faraday in working out a problem would seem vapid and tedious if the philosopher had to describe every step of the experiment in a language foreign and unfamiliar.

The mistakes of intelligence, so evident when the young speak, would be equally evident when the young are spoken to, if the speakers, in their wisdom, could find out the real impression made, and how widely it often differs from that which is intended. We hold forth from our several pulpits, flattered by the attention we receive, but forgetting that the monody so respectfully listened to, becomes, even as it leaves our lips, but

a mere pleading at the bar of private criticism; that our jury will take very different views of our arguments according as each is biassed by his knowledge, his ignorance, his passions, or his prejudices, and that counsel on the other side are to have their turn, and may enlist all these against us, and scatter our arguments to the wind.

Public lectures are like the talk of adults to children. The vacant and inattentive are a positive annoyance; it is a vexation to talk to those who will not listen, or cannot understand.

But the intelligent countenance, the fixed and attentive eye, are apt to betray the teacher into a dangerous error, that of supposing himself understood when he is not so in reality. The image conveyed to the sensorium may be accurately drawn, but the very nature of the apparatus which conveys it makes it refract every ray as it passes through; and until the mental apparatus becomes educated, false impressions are produced by the very truest information—the senses have to correct each other by experience.

Teaching resembles that optical experiment where the prismatic colours are arranged on a flat surface, which, when rapidly revolved, blends them together, and forms white light.

The teacher so arranges his facts or his reasons, that the whole, when united, shall present the white light of truth; but as he presents them one by one, the eye or the fancy is apt to rest longer or more attentively on one than on another, and the whirl of his ideas, though rapid enough to ensure confusion, fails to produce truth. Or entire objects, clearly enough drawn and coloured in themselves, may be placed in false relative positions, and resemble another well-known optical toy, where figures drawn on the same plane, and revolved, are made to look as if jumping over each other.

Some teachers have a peculiar dexterity in producing, and some observers in perceiving this optical illusion, the materials for which abound in every department of life. The great religious movement of the day, and an article in the Quarterly on the stocking and preserving of fishponds, might by such people be ingeniously combined, and Puseyism be denounced as a subtle device of interested parties to promote the consumption of fish, by inculcating the observance of fast-days; as Dr. Johnson was accused of using hard words in his popular essays, that his dictionary might be needed to discover their meaning.

The actual information received by a young listener on any subject cannot, then, be inferred from the actual instruction given, what is heard may be very different from what is learnt: there is a difference not only in quantity, much being lost in the mere process of pouring from one vessel into another, but also in quality, from the very nature of the receiver, and of the matters brought into combination. The testing of the various products by minute examination is a process that cannot be commenced too early, nor performed too often. When it is very long delayed there is apt to be grievous disappointment at the worthlessness of the compound produced from so many rich materials. How the whole spirit and savour of some have evaporated, how others, too hastily combined or too little qualified, have wrought fiercely on the receiver, or on each other, bursting or corroding the vessel, too feeble to contain them, or wastefully boiling over in frothy conceit and impertinence.

These are evils inseparable from the system of lecturing; from any system in which the talking is all on one side. Common sense, says an ingenious modern essayist above alluded to, is

never the product of a single mind. In the public school, the club, or the market, it may be gained at the cost of high moral qualities, but that which is obtained at the sacrifice of such qualities, instead of by their assistance, is not really common sense, it is usually mere knowledge of the world, that worst kind, which has been described as the property of mere cunning men.

When lecturers were few, and thinly scattered over the country, or even over the civilized world, they were men elected, though without ballot box, or any other machinery whatever, by the universal suffrage of the republic of letters, and those who took the trouble to go and hear them were mostly patient, diligent students; how to acquire their art was what they went to learn of the lecturer, and when they had been told how to do this, they went home and did it each for himself as best he might; but teachers have multiplied exceedingly, and as their benches must be filled at all hazards, they have some of them—may we not say, most of them?—professed to teach not only how to learn an art, but the art itself.

It cannot be denied that the art of teaching has greatly improved; but there is reason to fear that the more valuable art of learning is becoming more rare: indeed, if refinement in the art of teaching be carried much farther, the other will become needless, and finally be one of the *artes amissæ*.

The "wrangling" of the schools, once so celebrated, and the then grave questions of the schoolmen, which now seem so comical, were but contrivances for frequent examination and mutual instruction, laudable in their way and manner; the mind yearned to understand and digest the crude doctrines it received: such exercises, therefore, were most required, and their subjects were most absurd, when theory and dogma from the chair were received as knowledge and wisdom by the benches; when logic, the right use of reason, was taught as an art, instead of as a scientific method of learning other arts; when, in fact, the art of teaching was cultivated at the expense of the art of learning.

Such periods occur from time to time, and painfully call forth their approximate remedy, which varies according to the cause and nature of the evil. Of one thing we may assure students—and who in medicine are not students—let them cultivate diligently the art of learning. It is one thing to have a subject made clear in the compass of an hour's lecture: it is another to remember, to examine, to doubt, to be reassured, to apply, to labour, to overcome. Those who have seen much of students accustomed to the teaching of clever lecturers will know how lamentably they are wanting in the fruits of these laborious qualities. Clever lecturers, we said; men clever in teaching, men of genius, always impart something lasting to all who come near them.

UNIVERSITY OF LONDON.

B.M—SECOND EXAMINATION, 1843.

Monday, Nov. 6.—Morning, 10 to 1.

Physiology.

Examiner, Professor T. Rymer Jones.

1. In what classes of animals does a portal circulation exist? Describe the arrangement of the portal system in each class wherein it is found.

2. How is absorption effected in the invertebrata? State your reasons for the opinion you give.

3. Describe ciliary motion. State the principal opinions of physiologists as to its cause, and the more important uses to which it is subservient in various races of animals.

4. Describe the respiratory apparatus of a perennibranchiate batrachian, and the general course of the circulation of its blood.

5. Contrast the auditory apparatus of a cuttle-fish, a fish and a *reptile*.

6. What races of animals possess a distinct urinary apparatus? Describe the

principal varieties in its composition and arrangement.

7. Describe the corpora Wolffiana.

Afternoon, 3 to 6.

General Pathology, General Therapeutics and Hygiene.

Examiners, Dr. Billing and Dr. Tweedie.

1. Mention the deviations to which the fibrin of the blood is subject in disease, giving examples, 1. of those diseases in which there is an excess, and 2. of those in which there is a deficiency of this constituent. What consequences have been occasionally observed to follow a deficiency of fibrin?

2. Give an outline of the treatment of spontaneous hæmorrhage, stating the indications to be kept in view, and the measures best calculated to fulfil them.

3. Describe the effects of insufficient nourishment on the human body, in the respective periods of infancy and manhood.

4. Translate the following passage into English:—

Sanus homo, qui et benè valet, et suæ spontis est, nullis obligare se legibus debet; ac neque medico neque iatraliptâ egere. Hunc oportet varium habere vitæ genus; modò ruri essse, modò in urbe, sæpiùsque in agro; navigare, venari, quiescere interdum, sed frequentiùs se exercere, siquidem ignavia corpus hebetat, labor firmat: illa maturam senectutem, is longam adolescentiam reddit. Prodest etiam interdùm balneo, interdùm aquis frigidis uti; modò ungi, modò id ipsum negligere; nullum cibi genus fugere quo populus utatur; interdùm in convictu esse, interdùm ab eo se retrahere; modò plus justo, modò non ampliùs assumere; bis die potiùs, quàm semel cibum capere; et semper quàm plurimum, dummodò hunc concoquat. Sed ut hujus generis exercitationes cibique necessarii sunt, sic athletici supervacui: nam et intermissus propter aliquas civiles necessitates ordo exercitationis corpus affligit; et ea corpora quæ more eorum repleta sunt, celerrimè et senescunt et ægrotant. (Celsus, Lib. i. Cap. i.)

Tuesday, Nov. 7.—Afternoon, 3 to 6.

Medicine.

Examiners, Dr. Billing and Dr. Tweedie.

1. Describe the anatomical characters of arachnitis. What are its symptoms?

2. Explain bronchial or tubular, cavernous, and amphoric respiration, mentioning the pathological conditions on which they respectively depend.

3. In what diseases do ulcerations of the alimentary canal chiefly occur? Mention the symptoms by which these lesions may be recognised. What circumstances would lead you to infer that intestinal perforation had taken place?

4. Sketch the treatment of measles, including that adapted to the mild as well as to the more severe forms.

5. Describe the principal morbid alterations of structure to which the spleen is liable.

6. To what order in the classification of cutaneous diseases does acne belong? Mention its diagnostic characters and varieties.

Wednesday, Nov. 8.—Afternoon, 3 to 6.

Forensic Medicine.

Examiners, Prof. Daniell, Dr. Pereira, and Dr. Rigby.

1. What are the characters by which you would distinguish spots of blood upon iron from common rust, and what is the principal ambiguity to be guarded against?

2. Under what circumstances may lead be acted upon by water, and how would you detect its presence?

1. What are the symptoms and chemical evidence of poisoning by nux vomica?

2. The death of an infant is suspected to have been caused by an overdose of laudanum administered medicinally. You are required to state the smallest dose of this liquid which, in your opinion, might produce death; to describe the symptoms which would arise; and, lastly, to state how you would proceed chemically to detect opium in the untaken portion of the medicine.

Three women are brought before you, in whose cases you are required to give your opinion as to the presence or absence of pregnancy on the following data:—

No. 1 is a single woman. No. 2 is married, and the mother of three children. No. 3 is married, and has had six children, the youngest of them is six years old.

No. 1 denies that sexual intercourse has ever taken place. The last appearance of the menses was on the 1st of last September, and then very sparing; the areola is dark, (she is a brunette, and is subject to irregular menstruation, with much pain) there is no perceptible abdominal enlargement; the os uteri is easily reached; it is round and seems closed, and its lips tumid and soft; the cervix is also soft, and of the full size and length.

No. 2 states that her husband, a sailor, left home on the 8th of last May; the last appearance of the menses was on the 22d of May. There is a decided enlargement of the abdomen, the tumor reaching nearly up to the umbilicus. She denies that she has felt any movements like those of a child, nor have you satisfactorily detected any with your own hand. The os uteri is high up in the hollow of the sacrum; it is soft, round, and does not admit the tip of the finger; the

cervix is shortened, the uterus above it feels enlarged, and a moveable tumor within it is indistinctly felt. There is an areola, but she is of a dark complexion, and her youngest child is only a year old.

No. 3 reckons from the last appearance of the catamenia, viz. March 8; it was scanty, and there has been a slight show twice since. The abdomen is as large as in a woman at about the eighth month of pregnancy; it is firm to the feel; the breasts present no satisfactory proofs of an areola (owing to the discoloration from former pregnancies); the os uteri is in the middle of the pelvis, forming a transverse fissure; the cervix is long and firm; a solid and somewhat moveable body, of about the size of a child's head, is felt in the upper part of the pelvis. She states that she quickened in July, since which she has felt the movements of the child, which however you have not as yet succeeded in feeling with your own hand.

If you consider any of these three women to be pregnant, state the period of pregnancy; if not pregnant, what is the nature of the case? State also the grounds on which you have formed your opinion in each.

B. M.—PASS EXAMINATION.

Tuesday, November 7.—Morning, 10 to 1.

Surgery.

Examiners, Mr. Bacot and Sir Stephen Hammick.

1. How do you distinguish a carbuncle from any other inflammatory tumor? Give the most common situation in which it is found; the general constitution and age of persons subject to this disease; the symptoms and treatment, both local and general, of an extensive carbuncle, in its different stages; enumerating such circumstances as would lead you to prognosticate a favourable or fatal issue.

2. Give the treatment, both local and general, of a simple fracture of the thigh-bone, of a strong muscular man, at its upper third, the middle third, and the lower third, from the time of the accident to its final cure.

3. What are the injuries and diseased state of a testicle which requires its removal? Describe the operation of castration, with the subsequent treatment of the patient?

4. Detail minutely the method of amputating the upper arm near the shoulder-joint, and the fore-arm near the wrist, with the management of the stumps till they are healed.

Wednesday, November 8.—Morning, 10 to 1.

Midwifery.

Examiner, Dr. Rigby.

1. Enumerate the various conditions, diseases, &c. which are capable of simulating pregnancy, and state how they are to be distinguished from it.

2. Enumerate the unfavourable circumstances which may result from constipation, and otherwise deranged bowels, at the beginning of labour.

3. In a lingering labour, where it is ascertained that the pelvis is well-formed, what are the circumstances which will justify your waiting and trusting to nature, and the contrary?

4. In a lingering labour, as above alluded to, what means should be adopted to hasten its course before using artificial assistance?

5. What are the symptoms, causes, and treatment of Encysted Placenta?

6. Under what forms does the Asphyxia of new-born children appear, and what are the modes of treatment?

VIVISECTION.

To the Editor of the Medical Gazette.

Sir,

Since Dr. Hull opened the subject of vivisection in your columns, the only allusion to experiments on living animals, in a tone apparently opposed to the views entertained by Dr. Hull and myself, which I have observed, was a general reference to those of Orfila, Sir Charles Bell, and Dr. M. Hall. I will offer you a very few remarks on Orfila to-day, and probably submit a few on the experiments of the two other distinguished physiologists for your next number. As the reference has been general, so must be my observations. Most of Orfila's experiments, I believe, are related in, or were made with reference to, his work on Poisons; and whilst I trust I yield to no one in a respectful appreciation of the merits of that elaborate work, I deny that its practical utility is increased one iota by the numerous revolting experiments therein detailed. A very easy mode of testing this is the following:—Let the book be read excluding the experiments on living animals, and let the reader note his (the reader's) conclusions; let him read the experiments on animals, and then ask himself in what way the practical information he has gained is affected by the experiments. I affirm without the least fear that his conclusions will be in no respect changed. Let me, however, remind your readers that there is a great deal of difference in the experiments of Orfila. *Some* consist in giving poisons to an animal, noting its effects, and recording the morbid appearances; *most* of them involve the administration of poison, and the synchronous infliction of that which is in itself a grave injury; as separating and making holes in the œsophagus, placing a ligature around that tube, sewing up poisons in wounds, opening and injecting veins, &c.

The first class (some of which might perhaps be included amongst those which "involve nothing more than killing an animal with ordinary expedition") furnished results, which, had we not infinitely better evidence, might have been useful; but the whole has been rendered worthless, in a practical point of view, by facts in every instance collected from the human subject, and the comparative value of which, even in the opinion of M. Orfila, may be inferred from his own words: for in speaking of Saunders' work on Digitalis, in a foot-note, he says, that the facts are "D'autant plus precieux qu'ils ont été recueillés chez l'homme," &c. The actual fact is, that the materials afforded by medical treatment, occasional mistakes, accidents, and attempts at suicide, have furnished results, in regard to the subject of poisoning, which it is obviously impossible to educe, or even to imitate, much less to multiply by any experiments on any brute animals whatever.

It would require a volume at least one-eighth the size of Orfila's work to demonstrate this in detail. Let me, then, at some risk of dealing inexpertly with a subject which has not fallen much in my way, state the matter thus. Of course the sketch will obviously not include *all* kinds of poisoning, but it will serve to lead people to a quick and easy mode of testing the question, if they choose to read Orfila: the treatment of poisoning may be stated, I suppose, as general and particular. The general implying expeditious attempts to evacuate the poison by *mechanical* means, as stomach pumps or enemata; by *medical*, as emetics and aperients; 2dly, attempts (where not obviously contraindicated) to dilute its acrimony, or defend the surfaces in contact with it by appropriate fluids; 3dly, to avail ourselves of the chemical affinities, to form by a second body, itself innoxious, a *tertium quid*, that shall be inert, insoluble, or both; and, lastly, to combat any lesion, inflammatory or otherwise, which the poison may have occasioned. Now, sir, if in fulfilling, *quo ad*, our present knowledge, these intentions, we can deduce nothing from Orfila's experiments, but that which we can infer with much greater safety from other, and wholly unobjectionable evidence, and I challenge any man to show me the contrary, why, then, the proof that his experiments on living animals are practically useless, follows of course. I had made a list of references to Orfila's book, for the more easy reference of such of your readers as might like to consult the work with the least possible labour, but thinking that it might be misconstrued, I have not added them.—I am, sir,

Your very obedient servant,

GEORGE MACILWAIN.

9, Argyll Place, Nov. 4, 1843.

P. S.—I do not remark on the "douleurs les plus atroces," animals dying after hours of suffering, "au milieu des souffrances les plus horribles, &c." with which his narratives are interspersed.

DIAGNOSIS OF ANEURISM OE THE AORTA.

WHEN an aneurism is buried deep in the chest, and not capable of being detected by sight or touch, it does not present a single general sign peculiar to itself, and therefore pathognomonic of its existence. Cases are not wanted in which it occasioned no functional derangement or inconvenience whatever, and the first circumstance that reveals it is sudden death. There is only one unequivocal and certain sign, viz. a tumor presenting itself externally, having an expansive as well as a heaving pulsation, synchronous with the systole of the heart. Of the remaining general signs, viz. difference in the radial pulses, constriction at top of sternum, purring tremor, aphonia, dysphagia, pain in the spine, palpitation, dyspnœa, cough, tendency to syncope, terrific dreams, starting from sleep, hæmoptysis, discoloured complexion, congestions, serous infiltration, &c. &c. a large number are identical with those of organic disease of the heart or lungs, from identity of cause—obstruction to the circulation. The first seven mentioned above are however more characteristic than the others, although yet ambiguous and unsatisfactory, as they only bespeak secondary lesions, while they fail to proclaim the latent cause of the mischief. But when they coincide with the results of auscultation, they lose their ambiguity, and rise into real importance; for the general and stethoscopic signs reciprocally borrow a precision and certainty, of which, when taken separately, they are destitute.

Physical signs. — The most direct or positive symptoms of aneurism are derived from the impulse and murmur caused by or within the diseased vessels. Of course I mean when taken conjointly with those arising from compression or destruction.

When dilatation of the arch and ascending aorta is present, its presence is indicated, 1st, by a constant pulsation above the sternal ends of the clavicles; strongest at the side the enlargement is confined to; but this pulsation is never communicated to the costæ or sternum, unless the tumor is extremely large. 2dly, A hoarse murmur, loudest in the same situation, is generally present, synchronous with the systole, and having the same duration; this sound, like the impulse, will vary with the situation of the dilatation. I said loudest above the clavicles, because this fact greatly assists in

distinguishing it from that which proceeds from diseased aortic valves. It is also usually distinct on the back. 3dly, A purring tremor felt likewise above the clavicles, strong in direct ratio to the force of the circulation and to the rough and unequal state of the aortic membrane.

I am not aware of any general symptoms, or combination of them, characteristic of this affection.

Diagnosis.—False aneurism.—Sacculated thoracic aneurism indicates its presence by a pulsation both above and below the clavicles (stronger below). In the front the pulsation is more forcible over the tumor than at any point intermediate between it and the heart, or indeed than the impulse of that organ itself; when the disease is situated either in the beginning or middle of the arch, the impulse is strongest above and below the right clavicle and at top of the sternum, the base of the neck on that side being puffed and swollen. When situated at the beginning of the descent, the pulsation, &c. incline to the left. But if it affects the descending portion, the impulse is rarely felt in front, it buries itself so deeply in the lungs (as in two cases to be related), and even on the left side of the back the impulse will be much masked until the tumor becomes very large, and comes in contact with the costæ; however, percussion ought to indicate the presence of a solid body much earlier.

Murmur in old aneurisms is always discoverable to a sufficient degree, at least to be very much depended on; when, however, an *abrupt* murmur is perceptible on the back, over the seat of dulness, it ought to have considerable weight. But if on the back the murmur is more abrupt and rasping than the ventricular systole in the præcordial region, then the evidence of aneurism is almost positive.

Both in considerable dilatation of the cross and sacculated aneurism I have observed another symptom easy of appreciation, viz. by placing one hand flat over the suspected seat of disease, and the other opposite to it on the back, I have been enabled to assist, or rather render positive my diagnosis, which was otherwise doubtful.

The sensation of an expansive heaving being communicated to the hands (I do not mean impulse), all or either of the following general signs may be present: a pulsating tumor externally, dulness on percussion, dysphagia, aphonia, pain in the spine, aching and numbness of left arm, weight in the chest, inequality or extinction of left radial pulse, swelling at root of neck, double impulse of the heart when the tumor is behind it, and specially a peculiar mode of respiration caused by a pulsating body pressing on the bronchi.

The following are the sources of fallacy which must be excluded, *negatively at least*, from our premises, before we can safely attempt a conclusion, or arrive at a correct diagnosis:

1st. Glands and other tumors receiving pulsation from an artery beneath them.

2d. Hydropericardium.—The impulse in this case is never exactly synchronous with the ventricular systole, nor has it the powerful expansive heaving of aneurism, the shocks being of unequal force, and alike wherever heard; whereas in aneurism the impulse is stronger over the heart, than in the space between.

3d. Hypertrophy, with dilatation of the heart.

4thh. Subclavian and carotid aneurism, from which it may be easily distinguished.—*Dr. O'Bryen, in Dublin Journal.*

PROPERTIES OF BEBEERINE.

As regards the features which are characteristic of bebeerine as a therapeutic agent generally, I (Dr. Maclagan), think that the cases related entitle us to consider that it is a marked antiperiodic and tonic, and consequently that there is good reason to believe that it may be applied to the same purposes for which the more expensive sulphate of quinine is employed.

Contrasted with quinine, I should say from what I have observed in my own patients, that it is not so liable to excite the circulation. Dr. Watt, in one of his letters, writes to me—"I took ten grains of the sulphate on going to bed on 27th November, by way of trial. The taste was not more bitter than quinine, but continued much longer in the throat. It has a very astringent taste, causing the point of the tongue to have a leathery feel. I felt some fulness about the ears during the night, but no ringing. The same quantity of quinine would have made my ears ring for a whole night, and made me feel nervous next morning. After the bebeerine I had no nervous feelings whatever."

In a subsequent letter he says, "Whether or not the bebeerine affects the head like quinine, still remains a question. Dr. Blair's patients said not—mine that it did. But as my patients were stupid Portuguese, and had to be enquired at through an interpreter, who put a leading question, they may have answered yes, from politeness."

I may state that the astringent taste observed by Dr. Watt is characteristic of the salts of bebeerine, and is in no way connected with any adherent impurity, nor does it confer on the sulphate any astringent action on the bowels. On the contrary, in most of the cases in which I used it, the

bowels have remained regular without medicine.

It is unnecessary to say any thing further here, as to a secret medicine, extensively circulated under the name of "Warburg's Fever Drops," and which, as I have elsewhere stated, I believe to be a tincture of bebeeru, probably of the seeds. Like any other preparation of bebeerine, it may answer for treating intermittent or remittent fevers; but the supposition that it is applicable as a specific remedy to such a disease as our common continued fever, is a fallacy too obvious to require comment.—*Edin. Journal of Medical Science.*

INTERESTING EXPERIMENT.

The *Courrier Français* states, that a most curious experiment has been lately made in the hospital of the Salpetrière at Paris with a machine invented by Dr. Payerne, called the purifer, the object of which is to purify the air, without renewing it, in hospitals, prisons, mines, diving bells, and, in general, in all places where the air has been vitiated. This experiment, which excited the greatest interest from the important results to be derived from its success, was witnessed by deputies from the Academy of Sciences, the Administration of Hospitals, and by several distinguished chemists and physicians. Dr. Payerne entirely succeeded in what he proposed, viz. to purify the air completely in an enclosed space without communication with the external air. The thermometer, at the same time, descended several degrees. Dr. Payerne proposes, in a few days, to make an experiment with his machine on a diving bell in the Seine, by which the divers may remain an indefinite time under water without communication with the atmospheric air.

CASE OF HYDRO-PERICARDIUM:

PUNCTURE AND EVACUATION OF THE FLUID, &c.

A youth, 19 years of age, was seized with sharp pain in the right side of the chest, great dyspnœa, and other signs of pneumonia. He had been ill for some time when he was taken to the Vienna Hospital; the active stage of the disease had already passed over, and was succeeded by the signs of effusion within the thorax. The face had become puffy and œdematous, and expressed intense anxiety; the breathing was short, hurried, and accompanied with a rattling noise; there was a frequent cough, which brought on a pungent pain in the left side; the left jugular vein was much swollen, &c. On percussion, the whole extent of the sternal region of the chest was found to be very dull; under the left clavicle, however, and along this shoulder on to the axilla, the sound elicited was clear; but again it became dull over the lateral region of the chest. On the right side, the resonance was normal, except at the lateral parts from about the fourth rib. The liver was found to extend beyond the edge of the false ribs, for at least two finger-breadths. The impulse of the heart was very feeble, and the sounds of its action very indistinct. There was a strong respiratory murmur (the expiratory one being unusually loud) heard over the whole extent of the left side, except in the cardiac region, and also over the front of the right side: lower down, however, it was scarcely audible. The pulse was rapid, small, and irregular; the urinary secretion was scanty and deep-coloured. The pulse was rapid, small, and irregular; the urinary secretion was scanty and deep-coloured. The patient complained of a continual sense of pressure at the epigastrium, especially when he lay on the left side: firm pressure over the heart gave rise to a sharp pain in that region.

The diagnosis formed was that there was a considerable effusion within the pericardium—the consequence of pericarditis—causing the compression of the inferior lobe of the lung; also slight exudation in the right pleura, with an infiltration of the pulmonary parenchyma, the result of pneumonia; general bronchial catarrh.

As symptoms of a peritoneal effusion made their appearance in the course of a few days, it was determined to have recourse to *paracentesis pericardii* without delay.

The puncture was made (5th August) in the fifth intercostal space, about two inches from the left extremity of the sternum, and about one inch below the mamma—in order to avoid more certainly wounding the internal mammary, or any of the great vessels. At first, only a small quantity of reddish fluid escaped by the canula; but, by using gentle compression, as much as three pounds (livres) was discharged. The patient experienced great relief; and the double sound of the heart, as well as the "bruit de frottement," were heard much more distinctly immediately afterwards. Next day, symptoms of inflammation in the lower lobe of the left lung made their appearance: the patient was therefore bled. For several successive days, there was a manifest increase of the pericardiac effusion. Digitalis and iodine were administered, and mercurial frictions were employed at the same time.

As the disease was manifestly making progress, a second operation was performed

(22d August); but on this occasion not more than three-fourths of a pound of fluid flowed out. Again there was an attack of pneumonia; but it was fortunately subdued without much difficulty. The state of the patient seemed to improve until the 4th of the following month, when the dropsy of the pericardium and also of the peritoneum began rapidly to increase. Death took place on the 12th.

Dissection.—Adhesions of the right pleura, and considerable effusion in both cavities of chest—to the amount of between eight and nine pounds (livres) on the left, and of about five on the right side: both lungs compressed and flattened against the spinal column, and several patches of tuberculous deposit throughout their substance. Pericardium adherent to the heart over a great extent of its anterior surface; and several ounces of fluid within its cavity. The heart itself large and flabby; its cavities, especially those on the right side, considerably dilated, and filled with coagulated blood. From 15 to 16 *litres* of serosity within the peritoneum; this membrane somewhat thickened in several parts; the liver enlarged, dense, and of a brown-red colour. —*Schmidt's Jahrbucher.*

Remarks.—Most British physicians will unquestionably disapprove of the practice adopted in the foregoing case. No advantage could be reasonably expected from discharging the pericardiac fluid, while both cavities of the chest contained so much. We are not aware that paracentesis of the pericardium has ever been performed in this country. Without going so far as to reprobate the operation under any circumstances, the cases, we should think, in which it is justifiable, must be of exceedingly rare occurrence. It is a great error with many medical men to be desirous of doing something in every case: they seem to forget that there is quite as much skill required in knowing when to do nothing, as to employ vigorous treatment when this is called for.

A propos, we remember an anecdote of a clever but sarcastic surgeon, which may deserve reporting. On one of his colleagues, who was rather a busy meddling sort of practitioner, remarking, in reference to a dangerous case in the hospital, that in his opinion such and such were the "indications of treatment" to be pursued, he very coolly observed, that, in his opinion, "the only indication was death." The lesson suggested is a useful one; *ne quid nimis.—Med. Chir. Review.*

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The first meeting of this Society will be held on Tuesday next, Nov. 14, at half-past eight, when the following papers will be read:—

An Account of Two Cases of Rupture of the Ureter or Pelvis of the Kidney, followed by large Effusion of Urine into the Abdomen. By Edward Stanley, Esq. F.R.S., President of the Society.

Two Cases of Ulcer of the Stomach, producing circumscribed Abscesses in the Peritoneum. By Edward J. Seymour, M.D. F.R.S.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, November 2, 1843.

W. Spackman, Lutterworth, Leicestershire.—D. Perkins, Bridgewater, Somerset.—H. C. Hastings, East Dereham, Norfolk.—E. W. Pilgrim.—W. Smith, Newport, Bucks.

Wednesday, Nov. 8.

William Few, Huntingdon. — Henry Hayton Radcliffe, Liverpool.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, October 28, 1843.

Small Pox	13
Measles	34
Scarlatina	58
Hooping Cough	28
Croup	10
Thrush	11
Diarrhœa	31
Dysentery	11
Cholera	0
Influenza	2
Ague	0
Remittent Fever	0
Typhus	36
Erysipelas	4
Syphilis	1
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	157
Diseasesof theLungs and other Organs of Respiration	354
Diseases of the Heart and Blood-vessels	20
Diseases of the Stomach, Liver, and other Organs of Digestion	79
Diseases of the Kidneys, &c.	7
Childbed	8
Paramenia	1
Ovarian Dropsy	0
Disease of Uterus, &c.	4
Arthritis	0
Rheumatism	1
Diseases of Joints, &c.	2
Carbuncle	0
Phlegmon	0
Ulcer	0
Fistula	1
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	128
Old Age or Natural Decay	76
Deaths by Violence, Privation, or Intemperance	19
Causes not specified	20
Deaths from all Causes	1116

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, NOVEMBER 17, 1843.

CLINICAL OBSERVATIONS ON SECONDARY SYPHILITIC AFFECTIONS OF THE SKIN.

By B. Phillips, F.R.S.

There are in the Infirmary, at this time, three women and one man suffering from secondary syphilis affecting the skin. Some remarks on these affections may therefore be useful.

A. B., aged 32, has been under treatment many weeks for the most aggravated case of syphilitic rupia I have ever seen: it had been preceded by a vaginal or urethral discharge, and she believed by a sore. It affected a great part of the trunk and the extremities. The syphilitic cachexia was strongly marked. Her eyes and hair were dark; and they contrasted so strongly with the ashy character of the face, as to produce a very singular expression of countenance. The mucous surfaces were so irritable, the pulse so small, and the paroxysms of hectic so frequent—continuing for a week, and then abating,—that it was deemed prudent to trust to good food, wine, and sarsaparilla. Under this treatment, there was a very slight improvement at the end of six weeks. Iodide of potassium, in four-grain doses, was then associated with the sarsaparilla, and was continued for a month without any marked improvement. Recourse was then had to the proto-iodide of mercury, in half-grain doses, twice a day, with four grains of Dover's powder. At the end of a month the amendment was very remarkable: the appetite and the complexion improved; the redness around the rupia scabs, and the stiffness of the joints, were lessened; and from that time her progress towards recovery was steady; but there was so much damage to be repaired, that several months elapsed before the cure was complete: indeed, long after the cicatrization of every sore, she was not discharged, from her inability to move about; but gradually this inconvenience left her.

H. O., a sailor, aged 19, I treated for primary syphilis. He had a well-marked Hunterian chancre, with bubo. He was treated, after the first week, with one-grain doses of calomel and a quarter of a grain of opium, twice a day, until the system was slightly affected. The ulcer healed well, and the induration disappeared, but the bubo broke. He embarked, as soon as the discharge from the bubo ceased, on board an Indiaman, which had to touch at the Bermudas. Before he arrived there, he was laid on his back, with pains in his bones. He was invalided and sent home, and arrived with his face covered with rupia-scabs. He was ordered generous diet, a bottle of porter a day, and a pint of decoction of sarsaparilla. Under this treatment every scab was thrown off, and all his pains left him within seven weeks.

H. C., aged about 30, I treated for gonorrhœa, about which there was no other peculiarity than the occurrence of a copaiba eruption. Seven weeks from the contagion, he presented a well-marked exanthematic syphilitic eruption of the skin, and an excavated ulcer on the tonsil. At first he took iodide of potassium and sarsaparilla; but as the use of those medicines seemed to have no effect upon the eruption, recourse was had to the proto-iodide of mercury, with Dover's powder; and after three weeks of that treatment, the eruption disappeared, and the tonsil was quite well.

E. D., aged 24, you may recollect, was admitted for an ulcer near the margin of the anus. There was no appearance of disease about the sexual organs. The ulcer was very suspicious looking, but it very quickly yielded to black wash, and hyd. c. creta, with Dover's powders. During the next fortnight she complained of being out of health; at the end of that time the skin became

covered with papular syphilis, and syphilitic vegetations were developed by the side of the chitoris. She took proto-iodide of mercury—one grain every night, with one-third of a grain of opium,—and decoction of sarsaparilla. The vegetations were soon got rid of by being touched with aromatic vinegar. At the end of a month all that remained was slight discolouration where the papulæ had been seated.

M. G., aged 34, was under treatment for very severe orbital neuralgia. It resisted bark, steel, and opium. While under treatment, the surface of the body became covered with well-marked syphilitic psoriasis; he had an ulcer on the tonsil, and several acutely sensible white points on the margin of the tongue. It appeared that ten years had passed away since he had any disease of the genital organs: at that time he had a common chancre, which quickly yielded to blue pill. He had been married eight years, had several children, and both his wife and children were perfectly free from any apparent taint of syphilis. He took the bichloride of mercury, one-sixth of a grain twice a day, for six weeks. In the first forty-eight hours he became free from neuralgia, and the tenderness of the tongue and the throat disappeared. By the conclusion of the sixth week, during which he took the mercury only once a day, nothing of the disorder remained but slight discoloration where the patches of psoriasis existed. Many weeks had not passed before the tongue and throat resumed their former condition, and the spots became deeper. He resorted to the bichloride again, and followed it up for about five weeks, when he appeared to be quite well again. Many weeks did not pass without a new visitation; but on this occasion it came in the shape of neuralgic or rheumatic pains, stretching over the abdominal parietes. In this extremity recourse was had to calomel and opium, and pretty smart salivation was set up. Gradually the symptoms subsided, but the system was not rid of the enemy: irritation, and probably ulceration, was set up in the rectum, which eventually yielded to hyd. c. creta, which affected the system. This case was extremely obstinate: the affection had existed so long that it had become as it were a part of the economy.

A. W. had small, whitish, irritable points around the edge of the tongue, and a well-marked excavated ulcer of the tonsil; he had also three patches of syphilitic lepra of the scalp. Besides these symptoms, he had another, which I have only seen in one other case—a conversion of the integument on the inside of the thigh into a horny tissue—the appearance being like that which I have seen on the legs of old women in France who are accustomed to sit over chafing dishes. The patch on the inside of the thigh was about the size of the palm of the hand; there was a second patch on the inside of the leg, along the tibia. He was treated with iodide of potassium and sarsaparilla; but before the affection was quite got the better of, he had to take three courses, of six weeks each, of those medicines, and to be treated with mercury also. On each occasion the iodide, with sarsaparilla, acted very well; but after the third reappearance I thought it better to try calomel, which, however, never gave evidence of affecting the system, though in the end he took three grains three times a day. However, the treatment was successful; and the horny degeneration was gradually but very slowly dissipated.

You are well aware that a person who suffers from what is known as primary syphilis may, after a certain lapse of time, present another form of disease—a consequence, as we believe, of the former; and which is known as secondary or constitutional syphilis. Of these a great many specimens are observed here in the course of a year.

The most obvious signs of constitutional syphilis are certain cutaneous eruptions, but there is no necessary accompanying character of the eruption which infallibly marks it. The character upon which we are accustomed to rely most—and it is the most constant—is a certain modification of colour; and in the greater number of cases it is, no doubt, a good point. This modification of colour is a more or less decided coppery redness, which, when once the eye is accustomed to it, rarely leads to error. But as this colour may be much modified, or even entirely wanting, we might fall into error if we regarded all eruptions in which this character was absent as necessarily not syphilitic. Indeed, in vesicular syphilis, a rare form of the disease, the coppery tint is often indistinct, if not wanting. Sometimes, though more rarely, it is wanting even in the pustular and the squamous forms of the disease. In the tubercular, the papular, and the maculated forms of the disease, the copper tint is much more rarely wanting. In such cases, therefore, the coppery redness is a much more certain diagnostic mark than any other. It may be, however, that at first the eruption presents a simple redness, the coppery tint not making its appearance until a later period. Still, in the great majority of cases, there is present a very characteristic tint: it may not be a coppery red; it may be even a brownish or yellowish grey. By some pathologists the colour is supposed to depend upon extravasated blood—to be, in fact, something like ecchymosis; by others it is regarded as a change brought about in the pigmentary deposit, and this seems the most reasonable way of explaining it.

Some writers have maintained that cu-

taneous syphilitic eruptions have a tendency to arrange themselves in a circular form. A large number of non-syphilitic eruptions take that form, and therefore there is nothing upon which you can rely in this respect. The general diffusion over much of the surface of the body is a better characteristic. If to these features we add the common persistence of the affection after simple treatment, its disappearance after specific treatment, and the frequently long continuance of the colouration where the spot existed, and you have points enough to feel no doubt that, in the general appearance of syphilitic eruptions, there is something which usually impresses upon the mind a conviction that the affection is syphilitic, even before you obtain a history of the case; and any one who has seen many cases will rarely be in error. Still you will experience difficulties. The patient will positively deny that he has ever had primary symptoms. He may have had them, but so long ago—and in his mind there appears such an absolute want of connection between the two affections—that the recollection of it does not occur to his mind. Again, the social position of the patient renders it prudent, as he conceives, to conceal the circumstance. In fact, the light of history is altogether wanting; and we have to rely upon the features to which we have before alluded. In some doubtful cases we have recourse to mercury as a kind of test: if under its use the affection improves, it is at once regarded as syphilitic; if it resist, the presumed syphilitic nature is rejected. A non-syphilitic affection may improve under mercury; a syphilitic affection may for a long time resist its influence: witness the case of a patient now in the house with well-marked syphilitic lichen: she has been twice salivated. The case of the sailor, equally well marked, got well under sarsaparilla and a generous diet.

A great many men have advocated the opinion that what we regard as secondary syphilis is not a consequence of primary syphilis, but of the treatment which has been employed for its cure—mercury. Now have any of those who support that opinion known what we regard as secondary syphilis to occur where a patient had not been the subject of primary syphilis, even though mercury may have been pushed so as to induce profuse salivation? You have before you now a case of well-marked secondary syphilis, while the patient has not taken any mercury.

Cazenave gives 143 cases of secondary syphilis. Of these the primary affection had not been subjected to any treatment in 41 cases; treatment unknown in 5; simply antiphlogistic in 51; in the remaining 46 mercury was used.

It is clear, then, that whatever treatment is followed, secondary symptoms will appear in a certain proportion of cases. The Swedish tables showed that the proportion of cases of secondary affections was much greater after the mercurial than the non-mercurial treatment. This may be true; but I should be glad to see the experiment fairly tried, the mercurial treatment being prudently employed, before I accept the return made by those who advocate the non-mercurial system. It would almost seem that certain persons have a syphilitic temperament or disposition; and in them, no matter what treatment may be employed, secondary disease will occur, and will prove very obstinate. In most cases moderate mercurial action exercises a prompt and decided influence upon it; but in some it is necessary to use mercury again and again before it can be quite dislodged from the system.

You have had opportunities of seeing that primary syphilis does not always present a similar character; you have possibly heard that there is a plurality of poisons: into that question we do not propose to enter at present. But it is certain that the features of the primary affection are very variable. You have also had ample opportunities of observing that the secondary affections present quite as much diversity of feature. Now those circumstances have given rise to an opinion that the particular form of primary disease has a corresponding form of secondary affection.

Few men have bestowed more attention on secondary syphilis in general, and upon this point in particular, than Mr. Carmichael; few persons, I apprehend, are better qualified to observe; few, indeed, have enjoyed better opportunities for observation. From an attentive consideration of a vast number of cases, during many years, he concluded that a particular form of primary affection was followed by a particular form of secondary disease: "that the syphilitic chancre is attended by the scaly eruptions lepra and psoriasis, an excavated ulcer of the tonsils, and pains and nodes of the bones." "That the simple ulcer without induration, raised edges, or phagedenic surface—gonorrhœa virulenta, and excoriation of the glans and prepuce, are followed by a papular eruption, which ends in desquamation; pains in the joints resembling those of rheumatism; soreness of the fauces, and frequentiy swelling of the lymphatic glands of the neck; but that, in a vast number of cases, not a single instance was observed in which nodes were attendant upon this eruption." "That the ulcer with elevated edges, in the few instances in which I had an opportunity of tracing it to its constitutional symptoms, was followed by a pustular eruption, which terminated in mild ulcers, pains in the

joints, and ulcers in the throat, but no appearance of nodes; yet that the instances in which I had an opportunity of witnessing distinctly the connection between the primary and secondary symptoms of this poison were too few to form a decided conclusion with respect to this particular." "That the phagedenic and sloughing sores are generally attended by constitutional symptoms of peculiar obstinacy and malignancy, viz. pustular spots and tubercles, which formed ulcers, that spread in general with a phagedenic edge, and heal from the centre; extensive ulceration of the fauces, particularly of the back of the pharynx, obstinate pains of the knees and other joints, while nodes are frequently present, and the bones of the nose are occasionally affected." "That when an eruption, no matter what its character may be, is on a surface which is opposed to another, as on the fossa of the nates, upper part of the inside of the thigh, or in the axilla, the spots, if they do not ulcerate, extend into soft moist elevations of the cutis, which ought to be treated according to the nature of the disease to which they belong."

Such are the ideas of Mr. Carmichael—to which I cannot subscribe; at the same time I admit the subject to be surrounded with great difficulty. For instance, if I show you cases opposed to the rules above described, objections may be raised. If I shew you a case of gonorrhœa virulenta, followed by a well-marked squamous affection, with a fair excavated ulcer of the tonsil—and such is one of the cases before you,—it may be said, did the so-called gonorrhœa depend on a syphilitic ulcer within the urethra, or have I any proof that there has been no syphilitic ulcer externally? In the case of the sailor with syphilitic rupia, I treated the primary ulcer, and no better marked Hunterian chancre could be seen. The extremely aggravated case of rupia you so long saw in the women's ward, succeeded to a small syphilitic ulcer. It is hardly necessary for me to refer you to a number of cases to prove that you cannot confidently predicate, from the primary affection, what will be the form of secondary disease which may result from it; but as an ordinary rule, with very many exceptions, Carmichael is very possibly correct. Cazenave reports that, out of 58 cases of secondary disease succeeding to gonorrhœa, 23 presented the tubercular, 16 the pustular, 7 the squamous, 2 the exanthematic, 4 the vesicular form of the disease. Taking the whole of his cases, amounting to 146, they are thus distributed:—After chancre, 37 cases, of which 19 tubercular; 6 pustular; 5 papular; 7 squamous. After gonorrhœa, 54 cases, of which 23 tubercular; 16 pustular; 6 papular; 7 squamous; 4 vesicular; 2 exanthematic. After chancre and gonorrhœa, 50 cases, 13 tubercular; 21 pustular; 7 papular; 2 squamous; 5 exanthematic; 2 vesicular.

I have no doubt of these observations having been carefully made, but there are reasons why we should not regard them as conclusive evidence that the rule laid down by Carmichael is incorrect. In a large number of the cases of secondary syphilis treated by us, we have had no opportunity of treating or even seeing the primary affection, and it is certainly unsafe to trust entirely to the description of his case given by a patient. With reference to male patients, we may receive the statement, whether they have had a sore or not, whether they have had a discharge or not, but in the case of a female patient what is it worth? she may say she has had a discharge: even supposing it to be gonorrhœa, what proof have we that she has not had a sore at the same time? Carmichael's opportunities of observation were unusually favourable; he belonged to an hospital where a large portion of the patients were treated for the primary symptoms, and where they came to be treated for the secondary affection; he had therefore uncommon opportunities for comparing and connecting one with the other.

In some of the cases to which we have referred, the constitutional affection has appeared during the existence of the primary disease, but generally some weeks, often some months, and occasionally some years, pass away between the disappearance of the primary disease and the occurrence of the secondary affection. Sometimes, for weeks or even months, there is failing health, for which it is difficult to account, and it is then a great satisfaction to find the cause of suffering unmasked by the occurrence of a syphilitic eruption on the skin. A gentleman living in this neighbourhood had intense orbital neuralgia, for which he took bark, iron, and opium, without any permanent relief; suddenly his skin became covered with well-marked syphilitic psoriasis; bichloride of mercury was exhibited, and his neuralgia was quickly cured.

One of the most singular circumstances connected with secondary syphilis is, the long time which may elapse between the period of the primary and secondary disease. I have had under treatment a case where ten years had passed between the occurrence of the primary ulcer and the development of extremely well-marked syphilitic psoriasis. And in this case there were many circumstances to confirm the truth of the statement, and there was an absence of any reasons for concealment. But ten years is a small interval, compared to many in which the history seemed to be equally authentic. Cazenave relates cases where thirty or forty years have passed between the primary and secondary affection. These

histories have been discredited by some medical men, who have maintained that there must have been an intervening attack of primary syphilis, and by others who have expressed doubts as to the supposed secondary disease being syphilitic at all. Still, spite of those doubts, competent and experienced observers are convinced of the affections being secondary syphilis, and of the length of the interval which had elapsed. In cases where months or years have passed since the occurrence of the primary disease, and where the virus is, as it were, asleep in the system, it usually happens, at least that is my experience, that so long as the person continues in good health the syphilitic taint is not manifested, but when the general health becomes damaged by the occurrence of some other disease, then the virus seems awakened; the constitutional power of resistance is lessened, and the characteristic symptoms are developed. If the disturbance in the general health be owing to some affection of the mucous surfaces, it is upon them that the secondary affection is apt to manifest itself. If rheumatism affect a joint in a person whose constitution is tainted with syphilis, it is the articular system which may suffer; an injury to a bone may determine the manifestation of the disease on that part.

It has been a matter of question whether the particular form of the primary affection has any relation with the time of manifestation of the secondary affection. Martins sought to make out a mean of the time which may elapse between one and the other; he found that a longer time elapsed between the attack of a gonorrhœa and the occurrence of the secondary affection, than in any other form of disease, but the number of cases where the interval has been very long has been too small to justify much confidence in the results. The fact of the great discrepancy between the results afforded by the examination of about an equal number of cases at St. Louis, by MM. Martins and Legendre, clearly show that circumstance. Cazenave collected more than twice the number of cases observed by them, and the results approach to something near a mean of those of the other two.

It is not uninteresting to ascertain what is the particular form of primary disease which is most quickly followed by secondary symptoms. Cazenave's experience is in favour of the following order of development: Chancres with bubos, chancre, chancre and gonorrhœa existing together, gonorrhœa. The cases on which he observed are probably too few to lay down accurate rules; they amounted to only 153. Besides that, his mean interval between the primary and secondary affection is probably too long, and the result is of little value; it is little more than an object of curiosity. Thus, the mean interval between a chancre and its secondary affection is $4\frac{1}{2}$ years; the extremes 1 month and 24 years. Now, my mean is very different, because my longest interval is 10 years; my shortest nil; my mean under a year; and yet I conclude in both cases the deduction is fair. An accident may give one man an opportunity of seeing among his earliest cases one where the interval is very long. If he takes a mean from only a few cases, the interval may be very long. The only fair way is to take a very large number of cases, and then I am persuaded the mean interval would be very far under a year. Indeed, in the vast majority of cases, the interval is very much under six months. Then, again, as to the form of secondary disease, which is most tardily developed, Legendre, Martins, and Cazenave, give it in favour of the tubercular form, which has a mean of about seven years. You have now before you two cases (female) of tubercular syphilis. In one the disease was manifested before the patient was discharged from treatment for the primary disease; in the other, the interval between her discharge for the one, and her admission for the other, was only two months. Still I have no doubt that those authors made a fair deduction from the facts in their possession. Martins and Legendre have observed, that the pustular form of the secondary affection is that which is most speedily developed. I make out, on the contrary, from my opportunities of observation, that the papular and squamous forms succeed most promptly to the primary affection. Again, I am not agreed with Cazenave on another point: he says, that in 157 cases of secondary disease, 60 succeeded to gonorrhœa, with or without bubos. Of 73 cases of secondary disease I have registered, in only 7 instances could it be properly referred to gonorrhœa.

It has been said, "the treatment of secondary syphilis should be almost similar to that of the primary disease;" that, however, was the dictum of a man who regarded mercury as the remedy for the primary disease. In the present day, it is notorious that by one portion of the profession primary syphilis is treated without mercury. If they adopted the before-named principle, they ought to treat the secondary disease without mercury. It is not so, however; even the advocates for the non-mercurial treatment of the primary disease commonly have recourse to mercury in the treatment of the secondary affection.

I usually employ mercury in the treatment of the secondary cutaneous affections. For some years I relied almost entirely on the bichloride, which I have been accustomed to give in doses of from one-twelfth

to one-sixth of a grain, twice or three times a day, associated with sarsaparilla, and I have often been surprised at the promptitude of its action, especially where the mucous tissues are affected; it seems to be so readily diffused through the system; but I have again and again found that in a short time after the medicine has been discontinued the symptoms have reappeared. By resuming the medicine they again disappear, and in the end the disposition may be worn out. The circumstance induced in my mind an impression that in many cases it was necessary to induce a clear though slight mercurial action in the system, and this I have never observed under the use of the bichloride. I do not, however, mean to say, that a mercurial action fairly set up is sufficient to cure secondary syphilis; there are cases which will long resist mercurial action. I have often tried Plummer's pill; it will in most cases succeed, but its curative influence is much more slowly induced. Frictions answer well in many cases, and in hospital practice we can employ them, but in private practice patients are glad to avoid the inconvenience.

The form of mercury you usually observe me employ is a combination of iodine and mercury—the proto-iodide of mercury, and I prefer it to any other form. It affects the disease almost as rapidly as the bichloride, and I have not met with many relapses after its use. Cazenave thought it was more easily borne by patients than many other forms; he thought it did not often produce salivation. I do not know that I have found it to be borne better than the bichloride, and I have known it active in inducing salivation. The woman with syphilitic lichen is just now recovering from its effects; she took a grain daily for eleven days, when profuse salivation occurred. Still I prefer it to any other form, for the following reasons: it is more prompt in its action than any other form of mercury, except the bichloride, and its effects are more permanent than that, and on the whole I think it is borne as well as any other. I have never given more than a grain twice a day, associated with opium.

Although I rely most firmly upon mercury as a curative agent in these affections, I have not used it to the exclusion of other medicines. There can be no doubt that the iodide of potassium is a valuable agent in the treatment of secondary syphilis. No other form of iodine has succeeded so well in my hands, except the combination with mercury, but I have never exceeded ten grain doses.

Of the decoction of sarsaparilla, either alone or associated with mercurials, mineral acids, or the iodide of potassium, most men have had the opportunities of seeing the good effects.

I am inclined to believe that these several medicines act best each in a particular form of the disease, but I am scarcely in a condition to point out with confidence the case to which the particular remedy is best adapted.

I do not think we can rely on acids in severe cases, but where the symptoms are chronic, and the general health not seriously compromised, they occasionally do very well, but always best when associated with sarsaparilla. The latter decoction I have seen succeed alone in very severe cases. The case of rupia which is mentioned was of such a nature; so was a case of tubercular syphilis, represented in the wax cast before us. Where the case is a very severe one, it is upon the iodide of mercury, however, I rely. I must, however, caution you against the too precipitate use of mercury where the syphilitic cachexy is very decided—where the mucous surfaces are very irritable. In almost all such cases I begin with generous diet and decoction of sarsaparilla, reserving the mercury until the general health is somewhat improved, and the mucous irritability lessened. There are, however, few cases, whatever may be the internal treatment employed, which are not the better for the common warm water or the vapour bath, administered twice or thrice a week.

These are all the remarks I propose to make on the nature and treatment of secondary syphilis affecting the skin. I do not pretend to have completely considered the subject; all I sought to do was to bring under your notice the more salient practical points, leaving it to yourselves to fill up the picture; and this I trust I have done in as far as was consistent with our arrangements here.

REMOVAL OF A DROPSICAL OVARIUM.

By George Southam,
Surgeon to the Salford and Pendleton Royal Dispensary, Manchester.

(For the London Medical Gazette.)

In the early part of last March, Mrs. H——, aged 37, of dark complexion, healthy appearance, and nervous temperament, was admitted under my care at the Dispensary, said to be suffering from dropsy. She stated that she had been the mother of six children, and formerly enjoyed good health. Two years and a half ago, when five months advanced in pregnancy, she felt something suddenly give way in the left iliac region, whilst lifting a washing mug, which caused her to faint, and afterwards to vomit about a table spoon-

ful of blood. She experienced no other inconvenience, excepting occasionally some shooting pains in the part after exertion, until within six weeks of her confinement, when the pain became so frequent that she was prevented attending to her ordinary household duties. After an exceedingly protracted labour, in which she was attended by a midwife, inflammation of the bowels and side followed, which required repeated leeching and blistering. Two months afterwards she felt a small tumor, above and to the left side of the pubis, but thought it was only "wind in the bowels." Shortly afterwards the abdomen began to increase in size, accompanied with pains, at first slight, but latterly very severe, and at times so acute as to confine her to her bed. By remedial means the abdominal enlargement has been frequently reduced, but never with any relief to the pains. When I first saw her she had the appearance of being six months advanced in pregnancy; she complained of pains in the abdomen, especially on the right side, which were increased when in the recumbent position, and prevented her altogether from lying on the left side. She had also a feeling of bearing down and frequent desire to pass urine, which often caused great pain; her bowels were constipated: catamenia regular, and general health apparently but little affected. On examining the abdomen, I felt a circumscribed tumor above the pubis, inclining rather to the left side: it was about the size of the fœtal head at full term, and was very moveable under the integuments, but when drawn upwards caused pain in the left side.

There was distinct fluctuation, evidently from ascitic fluid, and percussion yielded a dull sound over the tumor. On examination per vaginam I found the os uteri perfectly healthy, and the uterus itself natural in size: the walls of the vagina were beginning to protrude externally: the tumor could not be felt, and apparently had no connection with the uterus. Being satisfied that the disease was ovarian, I informed the patient of the inefficacy of medicine in the cure of it, and that the only chance of its removal consisted in an operation, the dangers of which were fully explained to her. She appeared extremely desirous to be relieved of the tumor, which made life a burden to her, and resolved, at whatever risk, to submit to the operation.

Accordingly, I requested my friends Drs. Radford and Clay to visit her, who after a careful examination concurred, with me as to the nature of the case, and the propriety of operating. Some delay took place in consequence of my colleagues at the Dispensary not sanctioning this measure. At length all obstacles were removed by the female placing herself under my care as a private patient.

Having fixed Friday, the 20th of Oct. for the operation, I directed her to avoid any violent exertion, also to abstain from stimulating food and drink for a few days. The oxgall disagreeing with her, the bowels were cleared out the preceding day with castor oil, which having acted freely, on the following morning an enema was considered unnecessary. I marked the abdomen in two places with nitrate of silver, and the temperature of the room was raised to 70°. About half-past twelve the patient was placed on a table in the recumbent posture, and in the presence of Drs. Radford and Clay, Messrs. Vaudrey, Slack, Carew, J. J. Southam, and Dorrington, surgeons, I commenced by making an incision through the skin from the right of the umbilicus, along the mesial line, to within three inches of the symphysis pubis, and after carefully dissecting through the different muscular layers, exposed the peritoneum. I punctured it half way between the umbilicus and pubis, on which a quantity of straw-coloured ascitic fluid began to escape. When upwards of four quarts had flowed, I made the opening large enough to admit my finger. Finding there were no obstacles likely to impede the further progress of the operation, I enlarged the wound above and below, with a probe-pointed bistoury, to the extent of nine inches, using my fingers as a director. The tumor was now fully exposed, and the omentum being firmly adherent to it at the upper part, was carefully dissected away. Mr. Slack prevented the intestines from escaping, which were very much distended with flatus, and extremely vascular. Dr. Clay raised the tumor, whilst I passed my fingers behind the left broad ligament, to the whole extent of which it was attached.

As the patient at this stage becam

very sick, some difficulty was experienced in keeping the intestines from protruding round the pedicle. Instead, therefore, of using the ligature needle, I carefully made an opening with a scalpel through the centre of the ligament, at the same time protecting the viscera behind the tumor with my fingers previously introduced. Two ligatures were passed through the wound; the one near the uterus was easily tied, but the other broke, though it consisted of the strongest dentist's silk. The diseased mass was now removed by dividing the pedicle about an inch from the ligatures; the only hæmorrhage which followed came from the tumor, which being quickly removed, very little blood escaped into the abdominal cavity. The external integuments were immediately brought together, and after waiting a few minutes, during which the ascitic fluid was allowed to escape, the pedicle and omentum were examined, but there was not the least hæmorrhage.

The ligatures were tied on a knot and placed at the lower extremity of the wound, the edges of which were retained in juxtaposition by seven uninterrupted sutures and adhesive straps. Two long pads were placed on each side of the incision, and the whole secured by a broad bandage. During the whole operation, which the patient bore with great fortitude, not more than three ounces of blood were lost; and, with the exception of the delay occasioned by removing the ascitic fluid, which amounted to about fourteen pounds, it did not occupy many minutes. After being placed in bed, she was sick several times, complained of pain in the loins and left side; pulse 90, soft.

I ordered her gr. j. of Morphine in an ounce of Camphor Mixture, and to have nothing but toast-water, and that only in small quantities when thirsty.

Three hours after the operation.—Pulse 90, small; temperature of room 74°; not vomited since the draught; slept half an hour; surface of the body cold and moist; parted with flatus several times.

Half-past 6 P.M.—Pulse 95, soft and feeble; surface of the body comfortably warm and moist; temperature of room 73°; slept frequently for ten minutes or a quarter of an hour at once; no vomiting; pains in the loins and left side very severe.

Half-past 10 P.M.—Visited with Dr. Clay and Mr. Carew. Pulse 106, feeble and small; cough rather troublesome; parted with a considerable quantity of flatus; vomited once since last visit; not slept; passed about a pint of pale straw-coloured urine without the use of the catheter.

Rep. Haust. Morph. gr. $\frac{2}{3}$ds.

Half-past 12.—Pulse 110, small; complains of pain in the region of the stomach; vomited the draught; afterwards slept upwards of an hour, but has been sick twice since awaking; temperature of room 71°; ordered to keep it at 70°.

Habeat Morph. Acet. gr. j. in formâ pilulæ.

21st, 7 A.M.—Slept two hours after the pill; vomited several times within the last three hours; tongue white and moist; pulse 110, fuller; pain continues in the epigastrium and left side; abdomen distended, and rather tender on pressure; thirst and heat of skin increased; respiration free; no shivering; passed another pint of urine; flatulency continues.

Bled to 12 oz, which caused her to feel faint. To abstain from all kinds of fluids. When thirsty to rinse the mouth with water.

Half-past 11 A.M.—Pulse 120, soft; has still pain in the epigastrium and left side, but less severe than before bleeding; abdomen very much distended; passed urine and flatus, but had no motion; vomiting continues.

Habeat Enema Commune. Stat. Rep. Pilul. Morph. gr. $\frac{1}{2}$.

3 P.M.—No fæcal matter returned with the injection, but it caused her to part with a considerable quantity of flatus, which has given her great relief, having been free from pain ever since; vomited immediately after the administration of the enema, but not since taking the pill; pulse 120, soft; surface of the body comfortably warm and moist; thirst troublesome; slept at short intervals.

To have a little ice occasionally.

10 P.M.—Vomited several times since last report; she thinks the ice increases it; free from pain; pulse 120, soft and small; abdomen much distended, but not painful on pressure. Examined

* Dr. Clay examined the opposite ovary, and found it healthy.

the wound, but found no protrusion of the bowels; indeed it had almost healed: but the ligatures were missing, having evidently been drawn into the abdomen by the distension and frequent vomiting.

To repeat the injection, and to have a rectum-tube passed when the flatulence is troublesome.

Rep. Pil. Morph. gr. j.

22d, 3 A.M.—Vomited the pill, and continues sick; no motion with the enema, but it has relieved the abdominal distension.

Rep. Pilul. To take the effervescing magnesia occasionally.

7 A.M.—Pulse 120, small and feeble; sickness continues, but not so frequent since she began with the effervescing draughts; passed urine freely; tympanitis continues; had no motion; still troubled with flatulency; countenance anxious; feels very faint at times.

To have a turpentine enema. Rep. Pil. Morph. gr. ½. To take the effervescing magnesia every half hour, with ten drops of Sp. Am. Aromat. To have brandy and arrow-root in small quantities when fainting comes on.

1 P.M.—The injection not producing any effect, the nurse repeated it; what returned with the last was very offensive, but contained no fæcal matter; pulse 125, feeble; not vomited since last visit; slept at intervals.

Repeat the turpentine enemata.

Half-past 6 P.M.—A small quantity of fæcal matter came away with the last injection; not been sick since this morning; hungry.

To take a little panada.

Half-past 10 P.M.—Very low; countenance anxious, and eyes much sunk; pulse 140, thready; tongue beginning to assume a morbid redness at the edges, white and dry in the centre; had no evacuation; the abdomen still tympanitic; surface of the body comfortably warm and moist; no shivering; continues to pass urine without assistance; complains still of flatulence; wound healthy; removed four of the sutures.

℞ Ext. Col. Co. gr. v.; Hydr. Chlorid. gr. iij.; Mucilag. G. Acacia q. s. fiat pilul. ij.; St. Sumend. et rep. 3ta hor. si opus sit. Soda water ad libitum.

23d, 7 A.M.—Passed a comfortable night, having slept soundly for several hours; only been sick once, which was after the second dose of pills; free from pain in the abdomen, which continues tympanitic; still troubled with flatulence, and complains of a burning heat and rising in the throat, as if she had been drinking turpentine. Tongue white, moist, and less red at the edges; pulse 130, soft and feeble; skin moist and warm; no shivering; passed urine freely; had an injection half an hour since, which has brought away a small quantity of fæces; thinks her bowels will be moved shortly; if not in the course of an hour to have an enema of gruel containing 5 gt. Ol. Croton.

Continue the soda water.

11 A.M.—Still no evacuation.

Repr. Pil. Col. c. Cal.

3 P.M.—Vomited an hour after taking the pills; the heartburn very distressing; tongue dry; pulse very feeble, 130. Thinks she could take some castor oil in brandy and soda water.

Ordered half an ounce; if it remains, to be repeated every two hours until the bowels are acted upon.

10 P.M.—Had the bowels moved in an hour after taking the first dose of oil, and have been freely moved twice since; tongue cleaner and moist; pulse feeble, soft, 130; abdomen free from pain: she appears very restless, which, she says, is owing to the burning heat in her throat: no shivering; skin moist; been sick since last visit after taking some linseed tea, which she thought she could like. Taken a little beef-tea, which stayed.

Ordered soda-water and milk.

24th, 7 A.M.—Passed a restless night; been sick, which she attributes to the milk; complains still of the burning heat in the throat and stomach; tongue white and moist; has an extremely unpleasant taste in the mouth; no shivering; pulse 118, feeble and soft; countenance anxious; passed urine freely; and had one motion since three o'clock: complains of pain in the lower part of the abdomen, which shoots up towards the chest: feels sick, but has not vomited lately; the abdomen distended, especially at the lower part, but appears to be from flatus in the bowels; the wound has healed, except to the side and immediately below the umbilicus; removed the remaining sutures.

Omit the milk. Add a tea-spoonful of brandy to each dose of soda-water; rectum tube to be introduced, and afterwards to have an enema, consisting of four ounces of beef-tea.

11 A.M.—The beef-tea injection remained two hours, when she had a motion. The burning heat continues very distressing; vomited once since last visit, and still feels sick; at times pain in the abdomen. The pads were removed, a bandage placed over the plaisters, and a poultice of scalded bran ordered to be kept constantly applied.

To have iced jelly; continue the soda-water ad libitum.

Half-past 9 P.M.—Not been sick since this morning, and appears in every respect better: pulse 112. The jelly has relieved the burning heat in the throat.

25th, 7 A.M.—Passed a comfortable night, slept since ten o'clock without interruption; pulse soft, 112, still feeble; tongue moist, white, loaded at the base. The burning heat almost gone. Skin warm and moist; no coldness, or shivering; temperature 70°; urine rather thick, and after standing a short time deposited a sediment like brick-dust; less thirst; very anxious to be allowed a little tea, which was ordered; bowels moved once slightly.

To have some beef-tea and toast.

9 P.M.—Continues to improve; bowels moved freely once during the day; pulse 106, soft; not used the poultices to-day, having been free from pain in the abdomen; the temperature of room to be reduced to 65°.

26th, 12 A.M.—Was rather thirsty in the night, increased in consequence of being without soda-water; in other respects passed a good night, and slept soundly for several hours; had no pain since last visit; tongue cleaning, countenance improved; pulse 104, soft; passed urine freely; had a motion in the night, more consistent and healthy in appearance; not the least sickness; skin comfortably moist and warm; altogether very much improved; slight cough, which sometimes causes pain in the chest.

Half-past 8 P.M.—Has had some pain in the lower part of the abdomen, but the bran poultices have relieved it; both iliac regions are rather tender on pressure; not the least sickness; pulse soft, 110; says she feels herself much better. Having had no alvine evacuation to-day, she was ordered a common injection, and, if the pain returns, to foment the abdomen, and apply poultices afterwards.

27th, half-past 7 A.M.—The fomentation and injection removed the pain from the lower part of the abdomen; passed a good night; bowels moved slightly in the night, the fæces rather scybalous; tongue much cleaner; pulse soft, 106; passed urine freely; cough better; skin moist and warm; temperature 65; wound proceeding favourably.

Ordered—Ol. Ricini ℥ss. in brandy and water. To have some weak mutton broth for dinner.

Half-past 8 P.M.—Not so well; complains of pricking pain in the left iliac region, which prevents her taking a deep inspiration; can bear pressure on the abdomen, which appears to relieve the pain, evidently owing to flatulence; pulse soft; tongue continues clean; temperature of room 65°.

Fomentation with camomile flowers and poppyheads. To have the rectum tube passed. Pil. Morph. Acet. gr. ¼. st. sumend.

28th, 8 A.M.—Passed a comfortable night, having received immediate relief from the remedies prescribed; pulse 120, soft; hungry; able to lay on either side; parted with a deal of flatus during the night; countenance cheerful.

Diet to consist of veal broth, tea, jelly, and soda-water if thirsty.

29th, 10 A.M.—The flatulent pains returned suddenly in the night, which were relieved by the remedies ordered; much flatus passed after the introduction of the tube; pulse 125, soft, weak; tongue clean, but rather redder than natural, and papillæ at the end elevated; free from pain, but feels low; rather thirsty; passed urine freely in the night. Took some castor oil early this morning, which has not yet operated.

Ordered a common enema immediately. To continue the same diet.

30th, 10 A.M.—Appears much better; perspires freely; passed a good night; bowels moved three times yesterday; the evacuations rather scybalous; tongue clean and moist — still morbidly red; pulse 116. To have a light sago pudding for dinner in addition to veal broth.

31st, 10 A.M.—Passed a comfortable night; pulse 100. Took a dose of castor oil this morning, which has not yet operated.

8 P.M.—Complaining of pain in right side, increased on pressure; pulse 108, full; bowels been moved three times.

Appl. Hirudines, viij. part. affect.
Repr. Pil. Morph.

November 1st.—Pulse soft—morning 100, evening 110; feels rather low, but in other respects improved. Leeches relieved the pain and tenderness. Wound healthy, almost healed; bowels moved once; tongue clean, and more natural in colour.

2d.—Continues to improve. Pulse 100 in the morning, 110 in the evening, soft; tongue clean, and assuming its natural colour; bowels regular. Diet to-day consisted of sago pudding, veal broth,an egg, and dry toast.

4th.—Able to sit up; tongue clean, and perfectly natural in colour; can lie in any position, and says she feels comparatively well, suffering now only from debility; pulse 88 in the morning, 90 in the evening.

6th.—Wound not quite healed below the umbilicus; touched it with nitrate of silver. Sat up yesterday upwards of an hour. Took a mutton chop and half a glass of sherry wine for dinner, which agreed. Pulse 88.

9th.—Has gained strength considerably; able to walk about the room; wound quite healed.

12th.—Continues to proceed favourably.

Description of the Tumor.

The form of the tumor is nearly round, and rather flat, measuring about eight inches in diameter. It weighs four pounds, twelve ounces; and the ascitic fluid which accompanied it, fourteen pounds. The tumor is composed of solid matter and several cysts, which vary in size, giving it a lobulated appearance externally. The solid portion is most prevalent in the vicinity of the pedicle, which has a broad base. The natural structure of the ovary is entirely destroyed, the tumor affording an excellent specimen of cystic sarcoma.

REMARKS.—This case is interesting from several circumstances. It affords additional testimony in favour of a free incision into the abdominal parietes for the extraction of diseased ovaria. By the establishment of this practice, together with several valuable remarks on the operation, Dr. Clay has laid the profession under great obligations.*

The mobility of the tumor, and the large quantity of ascitic fluid which surrounded it, rendered it probable that it was comparatively free from adhesions, and attached by a long narrow pedicle; conditions which are essential for the success of the *minor operation.* This plan of Mr. Jeaffreson's consists in making a small incision, of one and a half or two inches in length, into the abdomen, through which the ovarian sac is punctured with a trocar, and when emptied of its contents drawn through the opening, its pedicle tied and separated†.

Had such an operation been adopted in my case, great difficulties would have occurred. After the evacuation of the ascitic fluid, cyst after cyst would have required puncturing, the adhesions could not have been removed with any degree of facility, the solid part of the tumor would have presented insurmountable obstacles to its extraction, whilst considerable difficulty must have been experienced in securing the pedicle (even if it could have been drawn through the opening), owing to its thick, broad, and highly vascular condition.

On this subject Mr. Aston Key says, that the minor operation, "at first view, appears to be the safest and easier operation, requiring a smaller incision of the parietes of the abdomen, and exposing, in a much less degree, the viscera to the existing causes of inflammation. These advantages, however, are more than counterbalanced by the difficulty of manipulation which the operator experiences in getting a large collapsed mass through a small parietal incision, and in reaching the peduncle of the cyst so as to secure it by ligature. The larger incision does not probably expose the patient to a greater chance of inflammation than a smaller one; and it has the incalculable advantage of giving free access to the tumor, and facilitating its extraction from the abdominal cavity without violence. I look on the absence of all undue forcible manipulation as the main recommendation which this operation possesses‡."

The major operation does not consist

* Medical Times, 1842-3.
† Trans. Prov. Association, Vol. 5.
‡ Guy's Hospital Reports, Oct. 1843.

in a direct incision from ensiform cartilage to pubis, as Dr. Bird appears to have inferred, but in making an opening proportionate to the size of the solid parts of the tumor; and, when the disease is extensive, and wholly or in part fluid, reducing it by paracentesis either previously to, or during the operation.

An exploratory incision midway between the umbilicus and pubis is very necessary at the commencement of the operation, as in this position we are less likely to encounter adhesions, which are more frequent near to the umbilicus. When the tumor is of great magnitude, adhesions to the abdominal parietes are generally found above as well as in the vicinity of the umbilicus, except when it is overlapped by the omentum itself adhering.

With respect to the treatment of the case, it will be seen from the report that, for the first four days, the issue was very doubtful; and had it not been for the timely application of the lancet, and the free administration of morphine, in all probability peritonitis would have ensued, which the vascular condition of the peritoneum at the time of the operation evidently indicated. Flatulency and nausea proved most troublesome symptoms.

The rapidity with which the peritoneum healed deserves notice: in thirty-six hours after the operation it appeared firmly united through the whole length of the incision.

Not the least important feature in the case, which is worthy the attention of operators, consists in the retraction of the ends of the ligatures into the abdomen. In one of Mr. Walne's cases I find a similar accident occurred, which was also not attended with any unfavourable result, the ends of the ligatures reappearing at the lower extremity of the wound, before it had entirely healed. (Med. Gaz. p. 437, vol. i. 1842.) The reader will no doubt be equally surprised to hear, as I was to find, that they had disappeared; for at least five inches of the cord were left external to the wound; besides the precaution being adopted of tying them on a knot, and placing a broad strap of adhesive plaster over them to retain them in their situation. This accident was evidently owing to the tympanitic distension of the abdomen, and the motion of the parts from constant vomiting, whilst the adhesive powers of the plaster were destroyed by the oozing of ascitic fluid through the wound immediately after the operation.

This circumstance is an additional proof that the peritoneum is not so susceptible of inflammation from irritation as many have supposed.

Whether the ligatures will become encysted, or, what is more probable, they will ultimately be discharged by means of abscess, it is at present difficult to prognosticate. If any peculiarities occur in the after progress of the case, I shall feel it my duty to impart them to the profession.

[To be continued.]

ON THE STATISTICS OF FEVER IN ST. THOMAS'S HOSPITAL,

WITH REFERENCE TO TREATMENT.

By H. Burton, M.D.

(For the London Medical Gazette.)

If the importance of any branch of medical study be estimated by the works which have been written concerning its objects, and by the labour which has been bestowed on their investigation, few are more important than fever; but, notwithstanding the time which has been expended in collecting facts relating to it, and the ingenuity displayed in constructing theories, more precise data are yet wanting to insure a uniformity of results under conditions of disease apparently similar, and to check, in the language of Sir Alexander Crichton, "those extraordinary changes of opinion and innovations in practice, which have succeeded each other so rapidly during the last fifty years in regard to the doctrine and cure of continued fever of an adynamic character." (Commentaries, London, 1842.) Having been often perplexed by contradictory precepts relating to the treatment of fever, and by what appeared to me unwarranted preference for particular therapeutic methods, I was lately induced to undertake the task of collating the results of six years' experience of the fever which usually prevails in this metropolis, from my own practice at St. Thomas's Hospital; and with the

hope that the conclusions may prove interesting to others engaged in making analogous inquiries, I offer them to the public through the medium of the MEDICAL GAZETTE. In the arrangement of data I have derived several useful suggestions from the valuable "Reports on the St. John's Fever and Lock Hospitals in Limerick," by Dr. W. J. Geary, published in the Dublin Medical Journal, Vols. XI. and XII.; and am happy to acknowledge myself indebted to this Report, as well as to the "Treatise on Fever," by Dr. S. Smith, (London, 1830,) for the means of comparing the average results noticed in the present communication. The fever to which my remarks apply was, in the years 1837 and 1838, epidemic in several districts of the metropolis, and between the spring of the former year and Midsummer 1843, 354 patients, including three in a moribund state, have been placed with this disease under my care, at the periods noted in the following table.

TABLE I.

Months.	ADMITTED. 1837	1838	1839	1840	1841	1842	1843	Total.	DIED. 1837	1838	1839	1840	1841	1842	1843	Total.	Monthly ratio of deaths to cures.
Jan.	0	24	8	1	2	2	2	39	0	1	2	0	0	0	0	3	1 in 13.
Feb.	0	6	5	5	4	2	1	23	0	3	1	1	1	0	0	6	1 in $3\frac{5}{6}$.
March	0	16	6	2	5	0	2	31	0	1	1	0	1	0	0	3	1 in $10\frac{1}{3}$.
April	5	12	6	2	6	0	2	33	0	1	0	1	1	0	0	3	1 in 11.
May	9	10	1	2	2	0	7	31	1	0	0	0	0	0	1	2	1 in $15\frac{1}{2}$.
June	11	10	4	2	4	0	6	37	1	0	0	0	0	0	1	2	1 in $18\frac{1}{2}$.
July	9	14	5	1	1	3	0	33	0	0	1	0	0	1	0	2	1 in $16\frac{1}{2}$.
Aug.	6	3	4	0	5	0	0	18	1	0	0	0	0	0	0	1	1 in 9.
Sept.	8	9	0	0	4	2	0	23	0	1	0	0	0	0	0	1	1 in 23.
Oct.	15	12	1	3	1	1	0	33	2	1	0	1	1	1	0	5	1 in $6\frac{3}{5}$.
Nov.	12	4	0	5	3	1	0	25	2	0	0	0	0	0	0	2	1 in $12\frac{1}{2}$.
Dec.	18	3	4	1	1	1	0	28	2	1	2	0	0	0	0	5	1 in $5\frac{3}{5}$.
Annual Totals.	93	121	44	24	38	12	20	354	9	9	7	2	4	2	2	35	
Annual average mortality.	$10\frac{1}{3}$	$13\frac{2}{3}$	$6\frac{2}{7}$	12	$9\frac{1}{2}$	6	10	$10\frac{4}{35}$	1	1	1	1	1	1	1	1	

No cases of scarlet fever, measles, erysipelas, or small-pox, are enumerated in the above table, nor are there any cases of simple gastric fever, or

acute inflammatory disease, purposely included, excepting such as were complicated with cerebral innervation, or the characteristic stupor of typhus, and extreme prostration; but all were conceived to be either analogous to the continued fevers described by Dr. Huxham as putrid, petechial, and slow nervous fever; as synochus, contagious and malignant, by Dr. Willan and other eminent authors; or, to that adverted to by my friend and colleague, Dr. Robert Williams, in his Elements of Medicine, pp. 25 and 27, as simple continued fever, peculiar to this country, under the name of typhus, "caused by the agency of a typhoid poison." But although the combination of symptoms observed in the cases above enumerated was for the most part the same in all, yet there was not a perfect identity between them, for many differed either in respect of the virulencc of the febrile poison, or some peculiarity about the previous condition and circumstances of the patient subjected to its action; there was nevertheless a sufficiently near correspondence between the principal features of the cases to entitle them to be considered examples of the same disease. It is not an object of this communication to give a detailed account of fever; but the reader should be informed, with relation to the influence of residence, and the previous condition and circumstances of the patients over the results of treatment, that they were for the most part servants, workmen, exposed to the ordinary hardships of their respective occupations, and others in a state of comparative destitution, inhabitants chiefly of the crowded districts of Southwark, or its immediate neighbourhood, where neglect of cleanliness about their abodes and persons, want, poverty, and fatigue, in conjunction with other depressing causes, tended to engender and diffuse fever of an adynamic character.

A short history of each case was usually obtained on the days of admission either from the patient or his friends, and the following analysis of the most remarkable symptoms noticed in 66 cases will give a tolerably accurate idea of their proportional occurrence in these as well as in the majority of the 354 cases enumerated in table No. 1.

Analysis of Symptoms in 66 *Cases of Fever admitted during the first five months of* 1838.

Great prostration and inability to walk on the day of admission in	31
Ordinary febrile prostration in	35
Consciousness and ability to answer questions rationally when roused by a loud voice, but constant drowsiness and partial deafness, in	56
Insensibility or delirium in	10
Redness in conjunctiva remarkable in	21
Headache in	41
Morbid heat of head, or surface of the body, in	54
Cold feet in	9
Rashes or petechiæ in	36
Radial pulse soft and regular, not small and weak, in	14
Radial pulse very weak, small and regular, with a proportionately weak cardiac action, in	46
Pulsations 112 to 130, usually 120, in	50
Pulsations below 100, including 5 under 70, in	16
Irregularity of radial pulse in	3
Anorexia, more or less pronounced, in	66
Tongue moist and white in	29
Tongue dry or clammy, and brown in its centre, usually clean at its sides, in	30
Abdominal tenderness on pressure in	19
Diarrhœa in	1
Costiveness in	14
Tympanitis in	0
Inspirations remarkably frequent in	15
Cough in	40
Dull sound on percussion over the chest, with indistinct vesicular murmur, in	48
Sore-throat and hoarseness in	3

No history of the accession of the symptoms is here required, but in reference to the duration of fever and its decline, it is proper to remark, that in no case was any sudden crisis observed; the disease subsided gradually, and its subsidence was marked in particular by an improving appetite, a cleaning of the tongue, and retardation of the pulse; the skin began to resume its ordinary temperature, the petechiæ or maculæ to fade, and the fulness of the features to be succeeded by pallor and contraction. As soon as these signs of amendment were unequivocally pronounced by a craving for more food, the patients were put upon a meat diet, and throughout the last six years and a half the immunity from any serious relapse was remarkable, particularly during the years 1837 and 1838. The few relapses which did occur were observed

chiefly among patients in whom symptoms referrible to the abdominal viscera had predominated, but no patient died in consequence of the return of fever after having been put upon a meat diet. In almost all the severe cases the brain, heart, and lungs, seemed to be during life the principal organs affected by the "typhoid poison," and in bodies which were examined post-mortem they were found to have been almost invariably more or less implicated; the heart was usually flabby, the lungs and brain congested, as well as in some cases the seat of organic lesions; the spleen gorged with blood, and easily broken down; the intestines sometimes ulcerated; but the alimentary canal was not observed to be so frequently diseased in the bodies examined at St. Thomas's between the years 1837 and 1843, as they seem to have been at Paris between the years 1820 and 1827, according to M. Andral's statement. (Maladies de l'Abdomen, t. i. p. 497.)

It is always more easy to recognize resemblances than to detect differences, and I accordingly feel more confident that the fevers enumerated in the foregoing table closely resembled one another, than that they did not differ in any material respect, so as to render them dissimilar diseases; and the same remarks may be applied to the fevers noticed in other statistical inquiries. Assuming, however, that my cases were examples of a similar disease, and strictly analogous to those noticed in other localities, the following and preceding average results of treatment lead to the inference that the mortality from fever varies very considerably at different periods from causes which act independent of locality. Thus :—

TABLE II.

At Limerick in 1817-18,	the mean annual mortality among	4062	patients was	1 in	$13\frac{1}{2}$.
" " 1819,	" " " " "	3053	"	1 in	$18\frac{1}{2}$.
" " 1836,	" " " " "	3206	"	1 in	15.
At Glasgow 1836,	" " " " "	1258	"	1 in	10.
London Fever Hospital in 1825, 1826, 1827, 1828,		2537	"	1 in	$6\frac{6}{10}$.
Milan (Sir C. Morgan) in 1812, 1813, 1814, about		300	"	1 in	$8\frac{1}{3}$.
Hospital Ship Grampus, January 1831, to April		73	"	1 in	$7\frac{3}{10}$.
St. Thomas's Hospital, 1837 to June 1843,	"	354	"	1 in	$10\frac{4}{35}$.

The variations observed in the rates of mortality represented above probably depend on many causes, some of which originate within, others external to the body, and operate in conjunction with the febrile virus; such as the existence of organic disease previous to the accession of fever; age, sex, day of fever on which treatment was commenced, and season of the year, among other modifying causes referrible to the usual condition and circumstances of the patient.

For the sake of information, therefore, I propose to inquire into the influence of these causes over the results of my own practice; and secondly, to compare these results with those collected from other sources.

Seasons.—Few circumstances appear to exert a greater or more universal influence over the results of treatment in fatal cases than the changes which are perpetually taking place among the components of the atmosphere, and due to the diurnal and annual motions of the earth, on which the seasons depend; but, by what particular atmospheric agent or combination of agents the variable rates of mortality are principally caused is not very obvious, although our sensations are affected more frequently and unequivocally by changes in the degrees of heat and moisture than by any other agency; and the joint influence of cold and wet weather is usually most productive of disease, independent of any other manifestly vitiated condition of the air arising from the presence of miasmata, poisonous gases, or extraordinary states of rarity or density.

The combined influence of atmospheric agents over the mortality from fever at different seasons is exhibited in the following table.

TABLE III.

Quarters of Years.	Number of cases admitted.	Number of Deaths.	Average quarterly mortality.
First quarter	88	12	1 in $7\frac{1}{3}$.
Second quarter	86	5	1 in $17\frac{1}{5}$.
Third quarter	74	4	1 in $18\frac{1}{2}$.
Fourth quarter	86	12	1 in $7\frac{1}{6}$.

The disparity between the rates of mortality at different seasons is very remarkable, and the results above exhibited show distinctly that a larger proportion of patients died from fever

during the coldest seasons than the hottest of the last six years. These conclusions are generalized by the results of treatment published in the 3d and 4th "Reports of the Registrar-General of Deaths from Typhus in the Metropolis during the Years 1838, 1839, 1840, and 1841;" also by the remarks of Dr. R. Knox, published in the Med. Gaz. for Aug. 1843, p. 771, on the applications to the Fever Board at Edinburgh for the years from 1833 to 1838, and in particular by the instructive Report, already noticed, by Dr. Geary, who states the mortality at Limerick to have been during the two hottest quarters as 1 in $15\frac{1}{5}$, and during the two coldest as 1 in $11\frac{33}{54}$ patients. The average mortality from fever is sometimes very high, but it seldom continues the same, and is generally much less annually than that which results from mixed diseases, chronic as well as acute, treated by physicians in hospitals, whereas the average mortality from mixed diseases remains nearly the same, and does not vary to any remarkable extent with the seasons. A rough estimate of the comparative danger to be apprehended from the two classes may be made by contrasting the mortality from typhus only, with that from all other diseases, including typhus, treated by the physicians in St. Thomas's during equal and corresponding periods, as exhibited in the following table, No. IV. shewing the aggregate number of deaths and admissions of patients with all diseases.

TABLE IV.

Months.	DEATHS. 1837	1838	1839	1840	1841	1842	Monthly Totals	ADMISSIONS. 1837	1838	1839	1840	1841	1842	Monthly Totals	Average monthly mortality
Jan.	18	26	13	31	15	13	116	121	131	141	117	99	115	724	1 in $6\frac{7}{25}$
Feb.	15	25	17	17	23	15	112	118	122	103	117	106	114	680	1 in $6\frac{1}{14}$
March	16	20	10	12	19	12	89	89	121	122	133	150	141	756	1 in $8\frac{1}{2}$
April	13	18	13	17	11	11	83	100	118	135	122	117	117	709	1 in $8\frac{1}{2}$
May	21	15	12	14	17	9	88	147	102	126	109	123	159	766	1 in $8\frac{3}{4}$
June	21	14	19	10	6	13	83	103	102	116	125	148	117	711	1 in $8\frac{1}{2}$
July	19	11	16	23	13	14	96	124	132	139	119	128	159	801	1 in $8\frac{1}{3}$
Aug.	17	18	13	17	10	16	91	140	144	109	107	153	115	768	1 in $8\frac{1}{2}$
Sept.	16	27	12	22	14	14	105	118	121	122	138	126	119	744	1 in $7\frac{9}{105}$
Oct.	18	11	12	15	13	20	89	138	124	131	94	107	179	773	1 in $8\frac{61}{89}$
Nov.	26	14	10	20	16	18	104	114	128	99	99	147	108	695	1 in $6\frac{3}{4}$
Dec.	26	14	14	15	15	10	94	116	106	118	108	90	134	673	1 in $7\frac{15}{94}$
Annual totals	226	213	161	213	172	165	1150	1437	1451	1461	1388	1496	1559	8800	
Annual average mortality	1	1	1	1	1	1		$6\frac{3}{10}$	$6\frac{4}{5}$	9	$6\frac{2}{3}$	$8\frac{3}{5}$	$9\frac{1}{2}$		Mean annual average mortality 1 in $7\frac{3}{5}$.

In this arrangement, the mean average mortality among 8800 patients for the last six years is shewn to have been 1 in $7\frac{3}{5}$; again, the average annual mortality in 1819 among 1008 patients placed under the three physicians of the hospital, was 1 in $7\frac{3}{4}$; and in 1820, among 1121 patients, 1 in $9\frac{1}{2}$, or the same rate as in 1842: hence there is good reason to believe that no material or constant difference in the rates of mortality has occurred at that institution during the last 23 years among the physicians' patients.

Sex.—Having adduced evidence of the unequal influence exerted by the seasons over the mortality from fever, let me next inquire briefly into the influence of sex, without reference to either season or age, as represented by the mortality which occurred among the total number of patients, 354, enumerated in Table No. 1. Of this number, upon reference to my notes, the admissions and deaths of the two sexes took place in the following proportion:—

TABLE V.

Sex.	Admitted.	Died.	Average Mortality.	Difference.
Females	145	11	1 in $13\frac{2}{11}$	5
Males .	209	24	1 in $8\frac{17}{24}$	

The rate of mortality, therefore, during corresponding periods was considerably greater among the male than female patients. A corresponding difference of 5, omitting fractions, was observed between the proportional mortality of the two sexes at Glasgow in 1836, by Dr. Cowan (Dublin Medical Journal, vol. xii. p. 99, &c.) where, among 1258 patients, 1 female died out of every $11\frac{1}{3}$ admitted into hospital, and 1 male out of $6\frac{1}{4}$. But the difference observed by Dr. Cowan and myself as regards the influence of sex was not noticed by Dr. W. J. Geary, at Limerick, in the year 1836, where the proportional mortality among females was 1 in $13\frac{1}{2}$, and among males 1 in 14. The influence of sex, therefore, is not invariably the same over the mortality from fever, and Dr. Cowan states, that although at almost all periods of life the deaths among males exceed those among females, yet under 15 years they are equal in the two sexes.

Age.—The ages of 311 out of the 354 patients enumerated in Table No. 1, were ascertained and recorded whilst in hospital; and the subjoined table shews that age, in mixed cases, and at all seasons, exerts a marked influence over the mortality from fever.

TABLE No. VI.

Shewing the relation between the ages, recoveries, and deaths, in 311 cases of either sex.

Ages	5	10	15	20	25	30	35	40	45	50	55	60	Over	Total known	Unknown in	Grand total.
Number of cases	20	31	66	68	35	20	17	16	13	5	6	1	13	311	43	354
Number of recoveries	19	30	65	61	32	18	16	14	11	4	2	—	12	284	34	219
Number of deaths	1	1	1	7	3	2	1	2	2	1	4	1	1	27	8	35

There is reason to believe, from the above statement, that the youngest have the best chance of surviving, and persons under thirty years are more susceptible of fever than those above that age; but that the proportional mortality among them is less than among those who have attained a more advanced age: thus, among 240 patients who had fever under or at 30 years, 15 patients died, or 1 in 16; but among 71 patients who were admitted during the same interval of six years,

above the age of 30 years, 12 died, or 1 in 6. The chances of recovery, therefore, from fever, is $2\frac{2}{3}$ greater among patients under 30 years, than between that age and 60 years. A similar conclusion, deduced from a much more extended series of cases, has been expressed by Dr. Cowan and Dr. W. Geary, and although our ratios differ, yet they are near enough to shew that the influence of age generally over the mortality from fever corresponded in Limerick, Glasgow, and Southwark. Thus at Limerick the annual proportion was 1 in 22 under and at 30 years; and 1 in $4\frac{1}{2}$ between 30 and 71 years. At Glasgow, it was 1 in 12 under 30 years, and 1 in 4 above that age.

[To be continued.]

CONTRIBUTIONS

TO

ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.

Lecturer on Anatomy and Physiology, and Corresponding Member of the French Academy of Medicine.

[Continued from p. 172.]

Part II.

It has been already stated in an early part of this memoir that an exception or two existed to the singular law, that in all mammals there are but seven cervical vertebræ. Some cetacea seem to have but six; the sloth has eight or nine. Now, are these supernumerary vertebræ in the sloth, cervical vertebræ properly so called; or are they dorsal; or may they not belong to a group of vertebræ intermediate of both, and such as the seventh cervical vertebra appears to be in man? This difficult question has been frequently examined, and perhaps most recently by M. de Blainville, whose opinion is as follows:—

I quote from the fifth Vol. of his great work on "Osteographie:" the observations have a reference merely to the aï or three-toed sloth (Bradypus Tridact., *L.*) for all sloths do not present the peculiarities in the cervical region of the spinal column about to be discussed.

"In the vertebral column there are but 41 vertebræ, instead of 47, as in the two-toed Bradypus, of which nine or eight are cervical, and 24 dorsal. The cervical vertebræ of the aï may be characterized by their having their bodies cut obliquely at both extremities; they are all nearly of the same diameter, and their processes are generally less distinctly marked than in the unau. The atlas, which is the largest, has an inferior tubercle, but no superior; the spinous process of the axis is also less than in the unau. The five following intermediate vertebræ present some slight shades of difference: the eighth resembles the seventh, being merely a little larger in all its parts: but the transverse process is bifid profoundly, the inferior lobe narrower and turned forwards, and the base pierced with a larger foramen than in the preceding.

"The ninth has finally more of a dorsal character, its spinous process being higher, larger, and sloped more backwards. The transverse processes are perforated at their base by a very small opening; they are simple, but much larger, thicker, obtuse, and curved downwards. On examining them attentively, as well on this ninth vertebra as likewise on the eighth, we find that the terminal third (of these transverse processes) is separated from the rest by a very close articular surface, which has induced Mr. Bell to view this epiphysis as a rudiment of ribs analogous to the asternal ribs of birds; an opinion we are very far from adopting."

In a lengthened note which, as the subject is interesting, I have taken the liberty to subjoin, M. de Blainville continues his examination of the singular exception, seeming or real, which the neck of the three-toed sloth presents to the great numerical law pervading all mammals.

"The dorsal vertebræ are sixteen in number; the lumbar three: these differ but slightly from their analogous bones in the unau.

"The sacrum appears to be formed of only six vertebræ, the transverse processes of the first not always reaching the bones of the ileum: on the other hand, the last sacral vertebra appears to be moveable, but whose transverse process, very long, is united to those of the preceding one, and to the iskion.*"

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* Philosophic or transcendental anatomy will find no difficulty in explaining, up to a certain point at least, most of the facts described in the preceding memoir. M. Carus, for example, who has embodied most of the laws of transcendental anatomy in his "Traité Elementaire d'Anatomie Comparée," would merely remind his readers

Setting aside, then, the more extended considerations connected with the transcendental anatomy of the vertebral column and ribs in the whole series of the vertebrata, as being inappropriate here, and limiting our view to the mammalia, and more especially to what structures we find in the sloth (Bradypus Trid.), and in man, it appears:—

1st. That as regards man, there are *seven* cervical vertebræ, divisible into three groups, viz.:—

		Man.	Aï.
Cervical vertebræ	1st Group	1st	1st.
		2d	2d.
	2d Group	3	3.
		4	4.
		5	5.
		6	6.
	3d Group		7th.
		7th	8th.
			9th.

That in respect to the five inferior ones (leaving out all consideration for the present of the first and second, as being peculiar and specific) at birth they are found to present three great centres of ossification, viz. a middle portion, which forms a *portion* of that part of the vertebra which the descriptive anatomist calls the body of the vertebra, and two lateral portions, including each of them a base or pedicle, entering largely into the composition of the so-called body of the vertebra, and forming ultimately the whole of the processes.

2d. That the transverse processes, being those only which here require being considered, present probably in all the vertebræ, when present, a double root presenting various stages of development: the posterior root being early ossified in the human cervical vertebræ, whilst the anterior are generally cartilaginous at birth and slender, compared with the posterior roots.

3d. That these anterior roots of the transverse process contain the elements of at least two *structures;* viz. a process which in the intermediate cervical vertebræ extending outwards unites with the posterior root, and so forms the foramen for the vertebral artery; and a shorter and stronger part, which ultimately becomes the *facet* for the articulation of another element; that is, the head of the rib.

4th. That in respect to the dorsal vertebræ the transverse processes have equally two roots, an anterior and posterior, but the development of the anterior root is limited to the formation of the articular facet.

The transverse processes of the seventh cervical vertebræ merit especial notice, because they absolutely combine, in more senses than one, the characters of both regions, viz. cervical and dorsal.

1st. They resemble the cervical in having the anterior root not unfrequently very perfectly developed, and thus forming a foramen, through which, however, I never heard that the vertebral artery does pass, although this is the use assigned for the foramen; but this anterior process may be extremely small, or not developed, and then the foramen may be completed in another way, viz.:—

2d. By the presence of a separate bone or rib, resting by its proximal extremity on the root of the pedicle or facet, and either extending beyond the extremity of the posterior root so as to form a rib, or uniting with the transverse process, and often mistaken for the anterior root alone: or,

3d. The rib may be present, and the anterior root too, shewing that they are independent structures, and not convertible into each other.

that each "protovertebral arch" is divided primordially into four parts on each side; two tergal, one superior, the other inferior; and two sternal, the one superior, the other inferior. The cervical ribs, then, are merely the proto-vertebral arches of the cervical vertebræ. The tergal portions of these arches are the arches which enclose the vertebral arteries; I presume he also includes the human cervical ribs, although he does not say so; and the sternal portions are the scapula and clavicle. These views, no doubt, are ingenious and profound; they belong to Goethe, and may be traced to Newton; but the physiologist, pursuing his inquiries into human physiology, ought, I think, always to endeavour to recollect that they are merely theoretical, and essentially abstract; correct enough, no doubt, but well adapted to mislead and misdirect the incautious. This with great deference seems to me the danger: these views are true in the abstract, but not so in the practical application; they confound the "creative idea" and the "results" or manifestation; they lead persons to suppose matters capable of intuitive evidence which can only be made the subject of abstract speculation. But it is surprising and pleasing to observe, how beautifully, by keeping in view the sublime abstract doctrines of Goethe, individual facts receive illustration and explanation. The subdivision of each rib, for example, and its cartilages, into distinct elementary portions, germs, or elements, each distinct and dependent, and each following its own laws of development, is a fact, proving the "creative idea" to have been essentially complex, yet simple, sublime, all foreseeing.

As regards the genus Bradypus; for a reason unknown to us, but probably connected with the extinct or fossil mammal (provided we can call them mammalia), nature has departed from a law at first thought to be universal, and multiplied the number of the cervical vertebræ in certain species of the sloth to eight or nine; which vertebræ probably form a distinct group, analogous, however, to the seventh in man: they carry ribs, which are more rudimentary than in man, being limited in their development to the tubercle and a portion of the body, whereas in man the cervical ribs have a head and neck, tubercle and body, complete; and that such an appearance has additional analogies with the classes birds and reptiles, but that for the present the connecting links are unknown.

In respect to the region to which these supernumerary vertebræ may be supposed to belong, they must still be considered as cervical; the circumstance of their carrying a rib not being a sufficient reason for considering them as thoracic or dorsal. If we admit it as sufficient we must then change the nomenclature of the human skeleton, and say that man has only six cervical vertebræ, inasmuch as the seventh so-called cervical carries a rib, probably quite as regularly so, as the eighth and ninth in the sloth.

MIDWIFERY CASE.

To the Editor of the Medical Gazette.

SIR,

I HOPE the case stated below may not be unworthy of your columns; it is one which is probably of common occurrence to more experienced practitioners than myself, but as it made some impression on me, I send it you, that it may benefit others in like manner.—I am, sir,

Your obedient servant,

J. H. STALLARD,
Surgeon.

New Street, Leicester,
Nov. 1843.

Nov. 1st, 8 P.M.—I was sent for to Mrs. Morton, who had been in labour some time of her sixth child. About two weeks ago she had flooding to a considerable amount, and having ceased, it returned with increased violence last night. Since this time she has had constant flooding. She states that she had pains four days ago, and that her waters broke at that time. She is now pale and debilitated; has no uterine pain, and the hæmorrhage is considerable. The os uteri is dilated to a considerable extent, and the head is felt through a thick rough substance resembling the placenta. I now gave ʒss. of the ergot, in the form of decoction, and repeated the dose in twenty minutes, no effect having followed the first dose. This rather increased than diminished the hæmorrhage, and no uterine pains were produced. I now sent for my father, told him that I suspected "placenta prævia," as the hæmorrhage was so considerable, and the mass presenting much resembled it as to the touch. Having examined, he pronounced it to be the "placenta sure enough;" and as the woman was faint, we resolved to proceed at once. On tearing through the presenting substance, we found it to be composed of membranes highly thickened, and when broken through a large quantity of liquor amnii escaped. That this was in fact liquor amnii was ascertained only by inspection, as we were quite convinced that it was the placenta which was felt. The hæmorrhage now stopped, and the labour proceeded as well as the weakly state of the woman would allow.

The error of diagnosis was here caused—1st, by the statement of the woman that the membranes were already ruptured; 2dly, by the hæmorrhage before and during labour; and lastly, by the peculiar feel of the thickened membranes. The point of practice which this case inculcates is, to ascertain that the fluid poured out by the rupture of the membrane be not blood; for I conceive that great experience in these cases, and in placenta prævia, will be required before we can tell the difference by the *character* of the rush of fluid, at least with tolerable certainty. It will be evident to what unnecessary risks we should have subjected the woman, if we had proceeded to turn without having surely ascertained the necessity for so doing.

CHOLERA.

Copy of a Letter addressed to the Medical Board of Bengal, by G. C. Rankin, Esq. Assistant-Surgeon to the Calcutta General Hospital, and dated Calcutta, 15th September, 1843.

Sir,

Continued and careful observation, with such opportunities as the General Hospital affords, and the perusal, within the last few days, of the most recent notes on cholera, having so fully corroborated my impression with regard to the nature and seat of that disease as to leave no doubt on my mind, I shall probably feel it a duty, ere long, to devote a few pages to the subject, for the purpose of laying it before the profession at large.

In the meantime, having discussed the matter freely with some twenty medical gentlemen of Her Majesty's and the Hon. Company's Service, within the past eighteen months, without encountering any important objection, I deem it expedient, for the information of the Medical Board, briefly to state my conviction,—

1st. That it is in the absorbent system the seat of the disease must be sought.

2d. That obstruction, from whatever cause, takes place in the absorbents, interrupting the passage of the chyle into the circulation.

3d. That the chyle so interrupted in its progress to the receptaculum chyli and thoracic duct, is regurgitated into the digestive canal; and

4th. That the so-called "rice-water" fluid ejected from the stomach and bowels is neither more nor less than the chyle so regurgitated, and which ought to have passed into the circulation, as well for the purposes of nutrition, &c. as to maintain the blood in a sufficiently dilute state for capillary circulation, and the sudden interruption of which necessary supply fully accounts for all the phenomena of cholera —for the almost immediate and rapid collapse, as well as for the subsequent capillary obstruction so conspicuous in those lingering cases where so much depends on the cautious attention and judgment of the physician.

I will not here anticipate my (possible) *brochure* on this subject, farther than by a general reference to reports of dissections, and particularly the very excellent statement, by Dr. Budd and Mr. Busk, of the Dreadnought cases; to the article "Cholera," in Dr. Tweedie's Library of Medicine; and to my own Case-book, and post-mortem notes for twenty months past: but a knowledge of the seat of the disease being the first and most important step towards successful treatment, I trust the Medical Board will regard this as a matter of sufficient general interest to warrant their submitting it to the medical department of this Presidency, with the view to elicit such objections (if they exist) as may not have presented themselves to me.

I have the honour to be, sir,
Your most obedient servant,
G. Rankin,
Assistant-Surgeon, Gen. Hospital.

J. Forsyth, Esq. Official Secretary, Medical Board, Calcutta.

CASE OF ACUTE BRONCHITIS.

COMMUNICATED
By Dr. Hastings.

(For the Medical Gazette.)

Charles Perry, aged 24, by trade a carrier, was born and always resided at Wickham Bishops, in Essex. His parents were long-lived and healthy; his hair red, complexion florid, and skin fine and clear. His general health was good until last February, when he sought relief for an attack of acute bronchitis. The prominent symptoms were then severe cough, frothy expectoration, difficulty of breathing, and considerable fever. This state of things soon subsided, but the difficulty of breathing and cough recurred, accompanied with expectoration of a well-marked purulent character, and nocturnal perspirations, and followed by great emaciation and consequent debility. On applying the ear to the right side of the chest anteriorly, pectoriloquy and a gurgling rale were perceptible. Various treatments were pursued until April, when, as improvement had not manifested itself, he withdrew from my care, and placed himself under Dr. Baker, of Maldon, who endeavoured to gain admission for him into the Colchester Hospital, but failed, in consequence of his disease being supposed to be pulmonary consumption in the last stage. Dr. Baker treated him for consumption, until an attack of hæmoptysis in July

led him again to consult me. His condition was now more feeble than at his former visit. Under the use of the acetate of lead and opium the spitting of blood shortly disappeared, leaving all the previous symptoms of pulmonary consumption unmitigated. Being unacquainted with any treatment possessing the power of stopping the ravages of this disease, I determined to try naphtha, not with any expectation that a beneficial result would ensue, for I must add, that I had not the slightest faith in its (alleged) powers in this formidable malady. On the 3d of August, then, I prescribed the following:—

℞ Naphth. Rect. ʒj.; Liq. Op. Sed. ʒij. M.

of which he took fifteen drops three times a day in a little water. The naphtha was persevered in for about two months, when he reported himself well, and resumed his employment of carrier between Witham and London, having gained about two stone in weight during the treatment. The first remarkable change was a disappearance of the nocturnal perspirations, which never returned after taking a few doses of naphtha. The cough and expectoration gradually yielded, and the only difference between his present and previous condition before the attack in February, was that his breath was rather short after considerable bodily exertion.

(Signed) A. G. Proctor, Surgeon.

Witham, Essex.
Oct. 21, 1843.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le ecteur tue à abréger."—D'Alembert.

Medico-Chirurgical Transactions, published by the Royal Medical and Chirurgical Society of London. 2d Series, Vol. VIII. Longman and Co. 1843.

[Concluded from page 181.]

Some Account of an Epidemic which prevailed at Teheran, in the months of January and February 1842. By C. W. Bell, M.D. attached to H. B. M.'s Mission at the Court of Persia.

The disease above alluded to consisted of pain in the head, spasms of the limbs, numbness, and more or less of paralysis; attended with fits, in which there were convulsions and stertor. Bleeding and purging were adopted in the first instance, and followed up by assafœtida, iron, and similar remedies.

On the Nature of the Ossification of Encysted Tumors. By John Dalrymple, Esq. Surgeon to the London Ophthalmic Hospital.

Mr. Dalrymple removed a small tumor from beneath the tarsal cartilage of the upper eyelid in a middle-aged man, which contained apparently earthy or bony deposit. Upon examining it with the microscope, the concentric layers were found to be composed entirely of epithelium scabs, closely connected together, but without any amorphous earthy deposit, the whole being composed of this epithelium.

On the Anatomical Characters of some Adventitious Structures, being an attempt to point out the relation between the microscopic characters and those which are discernible by the naked eye. By Thomas Hodgkin, M.D.

This paper is in continuation of observations laid before the Society in 1829, regarding the anatomical characters of certain adventitious structures. The author had formerly shown that these structures assumed the type of compound nervous cysts. He also shewed that there existed great differences dependent on the material by which this form may be assumed, and the organization it receives. The author next refers to the labours of Dr. Carswell and Mr. Kiernan, and then goes on to say that, in 1838, he visited Berlin, and received from Professor Schwann a demonstration of the nucleated cells, which he had pointed out as forming an essential part in animal and vegetable tissues.

The objects which arrest attention when a portion of one of the structures alluded to is placed in the field of the microscope (if this be of sufficient power) are as follow.

1st. Nucleated cells of various shapes and sizes.

2ndly. A substance having a filamentous character.

3rdly. Granular matter without definite shape, the particles of which are often smaller than those of the nucleated cells, but by combination

forming masses of comparatively large size.

4thly, Very minute spherical particles resembling fat globules, and also much disposed to aggregation.

5thly, Crystals, having for the most part a rhomboidal character, and often forming mackles.

6thly, and lastly. A transparent fluid, in which these objects are contained, and which is made evident by the motion which it permits to take place between them.

Dr. Hodgkin then enters into a very elaborate discussion on the subject, into which, however, our limits prevent us from following him. He concludes by drawing the following conclusions—

1st. That continued observation has confirmed the constant presence of the type of compound serous cysts in a class of adventitious structures, which comprehends the whole family of cancerous diseases. I may add that I have found it, not only in man, but also in the inferior animals, as, for example, the horse, the ox, the cat, and different species of birds.

Several practised observers have fully confirmed my conclusions, and I may here be allowed to record that the late Professor Delpech, and the present Professor Rokitanski, have personally informed me that they had independently been led to take similar views.

2ndly. That the microscopic examination of these tissues, though extremely interesting, does not furnish perfectly conclusive tests of any particular form of adventitious structure to which a specimen may belong; but that it demonstrates the application of the nucleated cell theory, whilst it is fatal to that of cancerous matter being formed in the blood, and eliminated at the spots at which the tumors become manifest. It therefore furnishes an important argument in favour of operation, though other practical considerations require to be attended to before operation is decided on.

3rdly. That to have a complete view of the mode of production of these structures, we must combine the cell theory of Schwann and Müller, the coagulation principle which I had previously suggested, and the process of organization investigated by Kiernan —three stages of development which appear to occur in the order in which they have been enumerated, and that none of the phenomena, taken singly, is an adequate test of malignancy, which, as stated in my first paper, must be regarded as the sum of several characters.

4thly. That chemical analysis, though extremely important and interesting, affords an imperfect and inadequate criterion; as the principles concerned may vary, or be changed, in the progress of development.

5thly. That in operating for the removal of a tumor of this class, it is extremely important to leave behind none of those minute cysts which often form granules in the surrounding cellular membrane, though it may appear to be, in other respects, perfectly healthy: this appears to be a mode of extension of the disease, independent of inflammation.

6thly. That experience teaches us that the infiltrated form of these diseases occurs in the structures in the neighbourhood of the purely adventitious growth, when these structures have been the seat of inflammation, and that the chances of success from operation are consequently infinitely diminished when such surrounding inflammation has taken place. The presence of the peculiar matter of the disease, in the interior of vessels, appears to be one of the modes in which infiltration, the result of inflammation, exhibits itself, and is, therefore, not a valid argument in favour of the pre-existence of such matter in the circulating blood.

An Account of a Case in which a Foreign Body was lodged in the Right Bronchus. By Sir Benjamin C. Brodie, Bart. F.R.S. Serjeant-Surgeon to the Queen, &c. &c.

This is a very interesting case, of which, however, we gave a full account in a former volume*. We shall merely state now that a gentleman placed half a sovereign in his mouth when playing with some children, and that it slipped behind the tongue: this was followed by vomiting, coughing, and straining, during which the piece of money was thrown into the trachea, and became lodged in the right bronchus. Fits of coughing, and other inconveniences, resulted; and, after various ineffectual

* Vol. 2, 1842-3, page 540.

expedients to get rid of the foreign body, an artificial opening was made in the trachea between the thyroid gland and the sternum, in order that, if the coin were within reach of the forceps, it might be extracted; and that, if not, the opening might serve as a kind of safety valve. It was found impossible to remove it, and various trials were made of the inverted posture without success. At length, on the 13th of May, the patient having been placed on the platform, and brought into the same position as formerly, the back was struck with the hand; two or three efforts to cough followed, and presently he felt the coin quit the bronchus, striking almost immediately afterwards against the incisor teeth of the upper jaw, and then dropping out of the mouth; a small quantity of blood, drawn into the trachea from the granulations of the external wound, being ejected at the same time. No spasm took place in the muscles of the glottis, nor was there any of that inconvenience and distress which had caused no small degree of alarm on the former occasion.

The only papers which remain are those of Mr. Toynbee on the Pathology of the Ear, Mr. Shaw on Rickets, and Dr. Webster on Insanity; full reports of which we gave at the time of their being read.

MEDICAL GAZETTE.

Friday, November 17, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

STATE OF MEDICINE ABROAD.

DURING the last eight or ten years a very remarkable and interesting change has been going on among our neighbours, and is still busily at work, as respects some of the fundamental points in the history of disease. The doctrines of solidism, so long almost universally received, and seemingly so well established, are beginning to give way on every hand to those of a modified humoral pathology. Broussais and all his favourite notions have for some time past been at a great discount; the more sagacious of his disciples seem quite ready to yield up first one position and then another; and, while explaining away some of the extravagancies of the system, to admit within the pale of their creed other morbid agencies besides those of irritation and inflammatory excitement. Even in the writings and lectures of M. Bouillaud, unquestionably one of the ablest of this party, we may observe symptoms of an uneasy consciousness that some of his long-cherished views have been carried rather too far; and M. Forget, the clever professor of the Strasbourg school, has lately begun to recognise the possibility of an altered condition of the fluids having something to do with many febrile disorders.

Several circumstances have occurred of late years to promote the change to which we allude. For example, the grievous want of success on the part of the medical officers of the French army in the late expedition to Africa, in treating the diseases that caused such ravages among the troops, has had no little share in opening the eyes of the profession throughout France to the errors of the system on which they have been hitherto acting. During the first two or three years after their occupation of Algiers and the surrounding districts, the mortality was truly frightful: all the hospitals were constantly full, and the proportion of the deaths to the recoveries was distressingly great. What with the unhealthy nature of the climate, the extreme hardships of the military service, the unsatisfactory character of the warfare, and the consequent *abattement* and discouragement which the French soldiers above those of every other nation are subject to when success does not shine upon them—these were amply suffi-

cient causes to account for the large number that was constantly on the sick list. The prevailing diseases were fevers of different kinds, chiefly of a remittent and intermittent character, but not unfrequently assuming all the features of bad typhus. Now, how were the medical men of the army prepared for the encounter? and what means did they take to baffle or subdue the enemy with which *they* had to do? Most of them, as a matter of course, young or middle-aged men, and who had been educated in Paris within the last ten or fifteen years, had scarcely heard of any other kind of fever save and except gastrite, or gastro-enterite, or dothin-enterite, or some other *ite* (unless, perhaps, *fievre typhoide* may have been introduced to their notice for a change), and were almost quite ignorant of what even their own countrymen, far less what the medical men of other nations, had observed in other tropical regions. Their minds being charged with home notions of disease, and with these alone, they could at first see nothing in the contumaciously obstinate, or rapidly fatal, fevers of their newly acquired province in Africa, but grave forms of what they had previously witnessed in Paris—a great and most pernicious mistake! We need scarcely add, that the treatment pursued was strictly in accordance with the most approved system of the metropolitan hospitals. The poor soldiers suffered terribly in consequence of all this; and the medical men themselves (many of whom unfortunately perished) frankly confessed that they became quite aghast at the utter impotence of all their efforts against the disease with which they had to contend.

This state of things continued, we believe, for two or three years; the fevers, as a matter of course, every now and then experiencing fits, so to speak, of increase and remission, according to the state of the weather, the season, the fatigues of the service, and so forth. At length M. Boudin, one of the medical staff, shrewdly suspecting that most of the cases of the African fever were rather of a remittent or intermittent than of a continued type, began to administer quinine and other tonic medicines in place of the lemonade and leeches that had been so much in vogue. The almost immediate diminution in the weekly bills of mortality bore abundant witness to the value of the change that had been made. The rest of the medical corps were not tardy in following the good example that had been set them, and the difference of opinion soon become not as to the mode of treatment to be pursued, so much as to the mere amount of quinine that required to be exhibited, or the comparative efficacy of bark and arsenic.

Something very similar to all this has occurred within the last year or two in France. An epidemic disease, rather novel in some of its features, made its appearance in Strasbourg, Avignon, and other towns. The chief symptoms were pyrexia (often very imperfectly marked), intense headache, severe pain along the spine, tendency to spasm and rigidity of the muscles, vomiting, &c.: delirium and coma almost invariably preceding death, which in many cases occurred in either 48 or 60 hours after the invasion. Now, this disease was at first regarded as a genuine inflammation of the brain and spinal marrow, and several learned memoirs were written on the so-called "epidemic meningitis or cerebro-spinitis." It was most heroically attacked with blood-letting, and all other sorts of depletion. Well, what was the result? More than one half of those that were seized,

died. This certainly was not at all satisfactory; but fortunately, at this time, an incidental discovery (as it was called) led to an important change in the remedies used, and to a marked diminution in the amount of the mortality. A physician in Avignon, having administered a dose of opium to one of his patients for the relief of some casual symptom, was surprised to find next day that the cerebral disturbance, so far from being aggravated as he had feared, was most effectually relieved, and that his patient was altogether decidedly better. He was therefore induced to repeat the dose, and the result seemed to be that the recovery was in a great measure attributable to the use of the medicine. Subsequent experience fully confirmed the truth of this idea, and M. Chauffard had the satisfaction of witnessing the practice which he had introduced, almost universally followed, and with very pleasing consequences. We should mention that saline aperients, cinchona, &c. were usually combined with opium. So much for the alleged epidemic of inflammation of the brain and spinal marrow.

With such histories as these before their eyes, it is not surprising that our mobile neighbours are beginning to modify their opinions on the subject of fever. But there are other causes at work, all tending to the same end—that, we mean, of introducing into favour the doctrine of a humoral pathology. One of the most important of these is unquestionably the great attention that is now paid to organic chemistry, in consequence of the remarkable impulse that has been given to this science by the recent researches of Liebig on the subjects of respiration, nutrition, and other functions of animal bodies. This truly original thinker has thrown out some valuable hints that serve to throw some light on the difficult question how fevers may arise from the introduction of a morbid poison into the blood. Whether his ideas be correct or not, they cannot fail to recal to the mind of the well-read physician, the doctrines of the older authors about ferments, acrid humours, and so forth.

This leads us to notice another agency that is beginning to exercise some influence upon the profession, not in France only, but in this and in other countries also—we mean the taste that seems to be springing up for the perusal and study of the ancient classics of medical literature. Last season there was actually a *seance* of one of the medical societies occupied with discussing the comparative merits of the Hippocratic and Galenian doctrines, and we now not unfrequently find in the lectures of some of the metropolitan physicians allusion to the opinions of such men as Sydenham, Stoll, and Baglivi.

In conclusion, we may point to the recent researches of Andral on the changes which the blood undergoes in various classes of diseases (*vide* his Essai sur l'Hematologie), as likely to have a very salutary influence in directing the minds of his professional brethren to more enlarged and correct views in this department of pathology. There are, no doubt, other causes we might mention; but we leave the consideration of these to another opportunity.

EXAMINATION IN MATERIA MEDICA AND THERAPEUTICS,

For Prizes given by the Society of Apothecaries, October, 1843.

1. State the mode of preparation, chemical changes and composition, the physical properties, physiological action, and practical uses of the *Potassii Bromidum*.

2. State the mode of preparation and the physiological effects of *Antimonii Potassio-tartras.*

3. In what diseases is the *Antimonii Potassio-tartras* exhibited; in what doses; and in what modes of combination is it most advantageously prescribed?

4. Describe the preparation of *Barii Chloridum*, its physiological effects, and its practical uses.

5. Enumerate the preparations of iodine, state their physiological action, and the diseases for which they may be prescribed, with their doses, and modes of combination.

6. Describe the preparation, the modes of operation, and the medical uses of *Potassæ Chloras.*

7. Describe the preparation, the physiological effects, and the uses of *Bismuthi Trisnitras.*

8. State the modes of preparation, physical properties, physiological action, doses, and practical uses of *Zinci Sulphas* and *Zinci Chloridum.*

9. Enumerate the class of diuretic medicines, and arrange them according to the modes in which they may be supposed to operate.

10. What means of recovery would you employ in cases of poisoning by opium, or by other narcotic substances?

The prizemen were—Mr. Frederick John Hensley, gold medal, of King's College; Mr. Henry Southerin, silver medal, of University College.

ON VIVISECTION.

By Robert Hull, M.D.

Letter III.

The world lies under great obligation to the biographer of Sir Astley Cooper. With a rare magnanimity, the author has combined a tender tribute of affection with a manly display of truth.

The famous surgeon has been painted with his darker as well as brilliant surfaces. The chiaroscuro is complete.

Among the shadier traits of this master-surgeon are his vivisections. See the wretched dogs, who administered to his rural sports, dreading to approach their zootomical lord. "Cor caninum habentem fugiunt canes," saith Pliny.

"It rarely happened but that one or two of the dogs which we had out had been submitted to operation. Some amusement was always afforded by the timidity which these animals manifested when near my uncle." Amusement!

Behold how a departure from humanity may lead a man farther—to processes of a furtive kind, which it is wonderful how a gentleman could reconcile with his fine sense of propriety.

"Charles has known thirty dogs, besides other animals, in the hay-loft, subjects of experiments. To obtain these, Charles used to employ the servants, and to allow half-a-crown for each dog. This temptation, I have reason to believe, led to a frequent breach of the laws relating to dog-stealing.

"My uncle's coachman, passing down Wormwood Street, a dog seemed inclined to follow. Michael thought it advisable to secure him by a handkerchief.

"The dogs were not unfrequently procured in this manner. Nothing but the objects which led to these delinquencies could offer an excuse." No, indeed! But can any possible objects justify a gentleman, that he should condescend to connive at theft?

Of those piteous, kidnapped dogs, how farcical to delay their torments until some days had elapsed, "and no owner would come to claim." Who *could* claim them? Who could know that the faithful companion he has missed and deplores is secreted within the cold murky walls of a ruthless anatomist, soon to be mangled, mutilated, knifed; with no friend to protect him, no spectator to pity him, no manly and indignant master to rescue him from the furtive physiologist?

"One day a dog followed us, and accompanied us home, little foreseeing the fate that awaited him. First, the tying one of the femoral arteries: when the dog was recovered, one of the humoral arteries. After a few weeks the animal was killed, injected." How was the confidence in human protection displayed by this dog, abused, betrayed!

"Dr. Haighton and Sir Astley were disputing. Sir Astley made a remark to controvert certain experiments made by the Doctor. The 'merciless Doctor' made no reply, but ordered a pet and favourite spaniel to be brought, and put a period to his existence. He then demonstrated the results of a rigid operation to which the animal had been subjected three years preceding." This is the anecdote the Quarterly calls "hellish." Such are the preceptors whom the youth of England are sent to London to revere and imitate. Of this dog the tendo-achillis had been cut asunder, his femoral arteries subjected to operation, his nerve of voice divided, as the narrator rather thought to prevent his making known his subsequent sufferings!

Surely, after this publication, ladies and gentlemen will be cautious whom they employ as their medical advisers, lest the presence of the family surgeon involve the absence of the family dog.

The dog is the most interesting of all

animals: endowed with all the moral qualities of man, with much of his intellect. Such is the testimony of all ages, from Homer to Pliny, from Bingley to Blaine. Any cruel treatment of this creature which would not be tolerated towards men is decidedly immoral; and, if life be sacrificed, murderous.

I appeal to natural feelings, to implanted sensibility, to heaven-born tenderness. If, on reflection, philosophers can mutilate, torment, slay, this wonderful animal, I am not Christian enough to pray for mercy on themselves. I entertain a hope that, in a future world, the cruel investigators may meet a talionic recompense: that the victims will become the operators in turn. Nor let the cyrotomist deride the possibility.

ὧρα τὸ μέλλον πόλλ' ἀναστρέφει Θεός.

The canicide might peruse in Pliny the marvellous character of this quadruped—enough to preserve his knife from cynic blood, his fame from cloudiness. He would learn that of all animals the dog and the horse were the most faithful friends to man.

When Jason, of Lycia, was slain, his dog refused all nourishment, and died of hunger.

When Sabinus and his slaves were put to death, a dog belonging to one of these would not be driven from the jail, nor separated from the body of his master. The place resounded with his howlings; and when a bystander offered him food he carried it to the mouth of the dead man. When, at length, the corpse was thrown into the Tiber, he swam in and tried to raise it.

Is this an animal to be tortured?

I hope the Sydenham Society will not forget to publish those parts of Pliny which tell upon the physiology of brutes, the pathology of men.

But I trust that a brighter era is arising on the destinies of these animals; and the formation of anti-cruelty societies cannot fail to usher it. The example has been set in London; and the provinces approve and are following.

In Norwich, an association protective of animals has been founded; and among the active members three are hospital surgeons. The names of Crosse, Johnson, Dalrymple, are an assurance to the public that all surgeons are not barbarian zootomists; to medical students, that success, fame, opulence, may be secured without performances which entitle to a lodgment in the nearest jail.

In Bury St. Edmunds a similar society has been instituted; and one of the most active founders is Mr. Smith, the senior surgeon of the County Hospital.

The vivisectors cannot, of course, enter into the depths of that well-grounded suspicion, that there may be a future existence for the brute creation. Yet this is a sentiment which has been advocated by some of the holiest divines, some of the wisest moralists.

It harmonizes with all arguments for the immateriality of mind, for the natural immortality of the soul. It solves the most difficult problem in the moral government of the Great Spirit. It reconciles us, without farther hesitation, to the unanswerable assertion of the Bible, that "God is love." To the vivisector who tortures whom God has created for use, who destroys whom the Deity intended for life, I would say, with the great and good Euripides, and with all imaginable contempt—

σκαιὸς πέφυκας, τοῦ Θεοῦ πλείω φρονῶν.

Norwich, Oct. 28, 1843.

CAUTIONS TO MEDICAL STUDENTS.

To the Editor of the Medical Gazette.

SIR,

THE welfare of medical students should be a matter of great interest to lecturers; to the medical journalist it is evidently so, from the pains which he takes in circulating all the branches of learning connected with our profession. The medical periodicals are in fact journals of education.

It is always unpleasant to contemplate the dark side of a picture, but we are occasionally compelled to do so in our intercourse with human nature, and as there is frequent communication between lecturers and students, it affords the former opportunities of seeing a great variety of character among them. The following portraits, although darkly shaded with the less favourable qualities of medical students, form, I believe, exceptions to the general rule, for the majority of them are anxious to qualify themselves in a proper manner. The cases are not assumed merely for the occasion, but actually occurred, and you are at liberty to publish them, if you think they are calculated to act as beacons to deter others from adopting a similar course.

It sometimes happens that a student has gone through all the branches of education with the exception of attendance on one course of lectures: a lucrative partnership offers itself; his schedule contains the signatures of the different lecturers to their respective subjects, excepting the one already alluded to. What expedient does he have recourse to? He hastens to the lecturer on that particular branch, and implores him to attach his signature to the blank part, certifying that the course has been attended,

otherwise his prospects in life are ruined. He admits negligence, but says that he has only one course, and pleads *the facility with which a signature can be attached*, and that he will tell nobody. The lecturer refuses to acquiesce: he then offers the double fee! This plan fails, and he departs in despair.

Another student applies dressed in mourning and depressed in his appearance, requiring a certificate of attendance on a particular course of lectures, which he has neglected to attend under the impression that no inconvenience would ensue from their postponement. He states that he did not imagine it would be necessary for him to enter into practice so early, but in consequence of the sudden death of his father, and his aged mother being unable to support him, he wishes to become a member of our profession. Tears follow the non-compliance with his request, and he is compelled to wait perhaps another year before his qualifications are complete.

A third anxiously desires the signature of a lecturer on the ground that his father has written for the schedule in order that he may see the names of the lecturers attached to the different certificates. He has become greatly alarmed, for some of the courses have not been attended, in addition to which he acknowledges having received from his father money sufficient to pay for them, but instead of entering to the lectures he has betrayed the trust reposed in him, and confesses he has been "too gay." His anxiety increases lest he should be detected in an untruth, having already informed the parent that he entered to all the subjects required in medical education.

Perhaps the publication of these remarks in your periodical may meet the eyes of a few students similarly disposed early in the present session, and act as a caution for them to be on the alert to qualify themselves in every respect, in order that they may be able to undertake duties likely to benefit others, as well as to advance their own prospects; and 2dly, in the event of being suddenly deprived of parental resources, they may be prepared to overcome the exigencies of life by their own independent exertions; and thirdly, it may be the cause of preventing them from misapplying the money entrusted to them by their parents, and throwing it into the lap of dissipation, which will cripple the means for obtaining knowledge likely to be the source of much happiness in their youth and comfort in old age.—I am, sir,

Your most obedient servant,

C. J. B. Aldis, M.D.

Old Burlington Street.
Nov. 4, 1843.

STATISTICS OF INSANITY IN FRANCE:

INFLUENCE OF CIVILIZATION.

The following letter was read by M. Briere de Boismont at a recent sitting of the Royal Academy.

"Five years ago, I had the honour of reading a paper before this learned assembly upon the influence of civilization on the production of insanity, and I then endeavoured to shew, by reference to numerous tables, that the frequency of this most melancholy affliction increases proportionately with the advances which a nation makes in social and mental attainments. Whatever opinion may be formed on this subject, no one can dispute the fact that moral causes give rise to alienation of mind more frequently than those of a purely physical or bodily nature. In 1807, Pinel distinctly enounced the truth of this position. Out of 683 cases, which had occurred within his own observation, as many as 464 were clearly attributable to moral causes. Esquirol, too, has added his valuable testimony to the same effect; for out of 274 cases which he has reported, 167 were traceable to the influence of psychical disturbance. According to the recent very elaborate researches of M. Parchappe, the relative number of cases arising from mental and from bodily causes is in the ratio of 63 to 37—the first being, therefore, nearly double the second.

If, then, the influence of the one cause be so much greater, and so much more generally felt than that of the other, we cannot be surprised to find that the frequency of insanity should increase with the advances of civilization, more especially in those countries where the mind is more worked and excited than elsewhere.

It is exceedingly difficult to obtain exact reports of the number of the insane in different districts of France. Although government has expressly ordered that each department should have its separate institution, this is still but very imperfectly carried out in various parts of the country.

M. Guislain, whose excellent works on mental disorders are universally appreciated, has stated, in his official report published by order of the Belgian Government, that the number of the insane in that country (as far as can be ascertained) is 5105, out of a population of 4,165,953 inhabitants; but he adds that this number gives only about two-thirds, or so, of the entire amount, in consequence of the number of insane persons dwelling in boarding-houses, convents, &c.

M. Boismont calculates the number of the insane in France at nearly 30,000.—*Medico-Chirurgical Review.*

ATROPHY OF THE HEART IN PHTHISIS.

Dr. Stokes said the specimens which he wished to present to the Society at that meeting were possessed of considerable interest. They were from the body of a man who had died of phthisis at a very advanced age. The heart presented an appearance which he believed had been remarked previously by only King, of London, and R. Adams and R. W. Smith, of Dublin. In the present case there was atrophy to an extreme degree of the heart, a condition already remarked as occurring in chronic phthisis, the heart observing the law of the atrophy of voluntary muscles, but what he particularly desired to direct the attention of the Society to, was the atrophied state of the aortic valves in this specimen; they were very thin, and in some places cribriform. The filaments corresponding to the perforations were as delicate as a spider's thread. The tongue of this patient was very red, smooth, and dry, but there was no inflammation of the stomach. This appearance of the tongue, usually designated *the beefsteak tongue*, has been also observed in fevers where there was no coexistent gastric affection; it is therefore not to be viewed always as a proof of gastric disease. The cavern in the lung was very large, and contained but little fluid; as it became dry the metallic sounds became audible; in the early stage of the disease, while there was fluid, there was gurgling, and the sounds could be modified by change of position. When the cavern had become dry, the expectoration ceased, but a little before death it was restored, and this was explained by finding in the opposite lung two small recently formed cavities. One hydatid was found in the kidney. As during a part of the progress of this case, the cavity in the lungs gave the metallic sounds as observed in pneumothorax, the diagnosis from pneumothorax was based on the signs which indicated the costal and pulmonary pleura to be in apposition.—*Dublin Journal of Medical Science.*

EXPERIMENTS AT THE GROTTO DEL CAVE.

M. Constantin James having lately visited Naples in company with M. Magendie, took the opportunity of making some observations and experiments at the Grotto del Cave. This well-known natural curiosity, situated at Puzzuoli, on the slope of a very fertile hill opposite the lake Agnano, is a cave, the walls and roof of which have the appearance of being rudely cut out of the solid rock, but it is not certain whether the excavation be natural or artificial. From various points of the surface there arise small bubbles, which bursting, deposit at the floor of the cave a carbonic acid, slightly whitened with watery vapour. Lime water dropped from a bottle becomes turbid on reaching the floor of the cave; a pistol with a flint lock repeatedly missed fire, but at last the smoke from its discharge settled on the surface of the gas, and enabled the depth of the stratum to be accurately measured. It was found to slope downwards, from the back of the grotto to the entrance being 60 centimetres in depth at the back, 35 in the middle, and 20 at the entrance. The stream of carbonic acid thus constantly flows over the threshold, and may be traced some way down the hill; at the distance of two metres it extinguished a candle. Even the air at the top of the grotto slightly whitened lime water.

M. James details several experiments which he made first on himself and then on animals. The dog, which for three years has been daily subjected to the process of suffocation several times a day, is in good health, but dreads the process exceedingly. The effects of the gases are perhaps modified by habit and intelligence.

M. James first knelt down in the grotto, plunging his head into the gas for fifteen seconds without breathing; a litle smarting of the eyes was the only effect perceived. The act of swallowing was then tried, and the agreeable sharp taste of the acid, reminding him of Seltzer water, could be perceived by merely fanning up the gas with the hand, without plunging the head into it. M. James then inhaled the gas, taking one strong inspiration, and was seized with confusion, giddiness, and constriction at the chest, relieved in a few minutes by breathing pure air. A more careful inspiration produced the same symptoms, with rather less feeling of suffocation, but a sensation in the forehead like that when carbonic acid escapes by the nostrils, from champagne.

A rabbit placed in the grotto near the door, where the stratum of gas was thin, escaped from its uneasy sensations by standing on its hind legs, but being placed further in it fell down in ten seconds; in seventy-five seconds all signs of life disappeared, but it began to breathe again after being five minutes in the fresh air, and in a quarter of an hour seemed well. Valuable experiments might be made here on the comparative efficacy of resuscitation. M. James tried a few, taking care in each case to immerse the animal in the gas for exactly the same length of time, seventy-five seconds. Cold affusions, and cold-water lavements, contrary to expectation, did not hasten recovery, though the animals seemed to recover their strength more completely after their use. Of two rabbits after immersion, one was made to

respire acetic acid (vapour), the other ammonia. The former recovered long before the latter. Alternate pressure of the chest and belly assisted recovery, but by far the most efficacious treatment was breathing carefully into the lungs of the animal. Those treated in this way began to recover in twenty seconds; those left to themselves showed no signs of life under five minutes. Forcible insufflation seemed rather less efficacious; gentle breathing seemed more in accordance with the gradual efforts of nature to restore the interrupted function. No rabbit was found to recover spontaneously after two minutes' immersion, but two were immersed for three minutes. One was restored in a quarter of an hour by breathing into its lungs, the other left to itself died. On opening the body, the right side of the heart was found gorged with blood, which hardly reddened on exposure to the air; the liver and spleen was also gorged; there was no effusion into the pleura or peritoneum; the fluidity of the blood was remarkable. Remembering the experiments of M. Magendie on the loss of coagulating power, M. James delayed the examination of another rabbit till eight hours after death.

The fluid blood had then transuded in various parts; the peritoneum and pleura contained bloody fluid, and blood could be pressed out of the ecchymosed surface of the lungs. The different appearances in two animals dying under exactly similar circumstances shows how much obscurity attends our examination of the human body, which seldom takes place within twenty-four hours after death. According to the account of the keeper, the following is the time required to destroy life in various animals which he had seen killed by immersion in the gas of the grotto; an account verified by M. James only in the case of rabbits and frogs:—

	Minutes.
Adder	7
Frog	5
Cat	4
Dog	3
Rabbit	2
Fowl	2

How long does man live in this gas? It is said that three centuries ago the Prince of Toledo tried the experiment on a criminal, tied hand and foot and laid at the bottom of the cave, and that the unfortunate prisoner, taken out in ten minutes, was found dead.

No comparison can be drawn between death so produced and that from the fumes of charcoal. In the latter case, the gas becomes gradually mixed with the atmospheric air; while in the grotto there is a stratum of pure carbonic acid, which produces almost instantaneous suffocation, like that sometimes caused by an imprudent descent into fomenting vats, or deep excavations. No vegetables are found growing in the grotto; those which are placed there soon perish. The soil of Puzzuoli is essentially volcanic, and abounds in thermal waters, most of which contain much carbonic acid. The earth at the floor of the grotto a little below the surface is two degrees warmer than the air, which is 38° Cent. Bubbles rise to the surface in two or three places on the near side of the lake Agnano, which is a few paces off, and five or six metres below the level of the grotto.

When the lake is clear, currents are seen passing from the direction of the mountain; the temperature of the water is not raised, and the bubbles, when collected in inverted test tubes, were found to extinguish a candle, and to whiten lime water. Doubtless a current of thermal water passes under the grotto into the lake, and furnishes an unfailing supply of the gas through the light and porous soil.—*Gazette Médicale.*

STRICTURE OF THE TRACHEA.

Mr. O'Ferrall said the specimens he had to lay before the Society belonged to a very interesting case of disease of the trachea, which had come under his notice in St. Vincent's Hospital. The subject was a female, aged 26 or 27 years, who had been a patient in that establishment several months ago, while she was suffering from phagedænic ulceration of the throat. She was successfully treated, and was discharged; but, in five or six months afterwards, returned to the hospital affected with stridulous breathing, a teasing cough, loss of voice, and extreme difficulty of deglutition. When the finger was introduced into the fauces, the epiglottis felt ragged and shortened: the respiration was feeble all over the chest, but no part sounded dull, and there was no evidence of either solidification of the lung, or of the existence of any tumor within the thorax. This woman died suddenly. Fumigations had been used, and had given a little ease. Tracheotomy was proposed, but decided against; and the examination after death proved that this decision was correct. The epiglottis was found to have been partly destroyed; the right arytenoid cartilage also was in a state of ulceration, but both appeared to be healing: the trachea itself was contracted; its parietes pressed together; the lining membrane was a pale yellow colour; the cartilages were softened, and the distance between them lessened; posteriorly the situation of the membranous portion was occupied by a growth of dense firm matter, which was connected with the cellular membrane behind, which was in a thickened state: below the cricoid cartilage the calibre of the trachea was strictured so that only a

very small bougie could be passed through; at the strictured point there had been ulceration of the mucous membrane. The diagnosis in this case was peculiarly difficult; the stridor in breathing was insufficient to point out the exact nature of the disease; its situation could not be discovered by auscultation, for it was equally intense in every part of the course of the trachea. It is known that stridulous breathing may be produced by pressure on the trachea, below the larynx. This case presented a new cause of stridor. It was evident, by examination of the specimen, that tracheotomy would have been quite ineffectual, as the opening would have been made just above the strictured part of the canal.—*Dublin Journal of Medical Science.*

ARSENIC IN INVETERATE SYPHILIS.

A WOMAN, who had lost the whole of her palate from syphilitic ulceration, and was in a most deplorable state of suffering, so that there seemed scarcely any chance of ultimate recovery, was put upon a course of the arsenical solution *(Fowler's)*: she began with three drops, and gradually raised the daily dose up to thirty.

After continuing the use of the medicine until she had taken two ounces of the solution, the amendment was truly surprising; the ulceration was arrested, and the general health rapidly improved: the power of deglutition also was almost completely restored.

In the same German journal (Hæser's Repertorium) is reported a well-marked case of scirrhus of the mamma, where the progress of the disease seemed to be quite arrested by the internal use of the Iodoret of Arsenic: in the course of six months, as much as 135 grains of this very active remedy were taken. It should be mentioned, however, that an issue was at the same time inserted in the corresponding arm—a remedy, by the by, that should seldom be omitted in the treatment of all malignant formations.

(Of late, the Chlorate or Oxymuriate of Potass has been tried, by many of the hospital surgeons in this metropolis, in cases of lupus, unhealthy ulcerations, &c. with very decided benefit—the dose from five to ten or twenty grains three times a day.)—*Med. Chir. Rev.*, from *Bibliothek for Læger.*

A CASE FOR THE HOMŒOPATHISTS.

Amaurosis following retrocession of itch.
By DR. FELSACH, of Ischl.

A GIRL, rather more than 20 years of age, strong and healthy, with dark well-formed eyes, was suddenly seized with *muscæ volitantes*, the appearance of sparks, and diminished power of vision in both eyes. Except some sluggishness of the pupil, nothing unusual appeared in the eyes; the spinal marrow was also unaffected. It was found that, three years ago, she had itch, which disappeared under the use of sulphur-ointment. M. Felsach attending to this circumstance, ordered the internal use of three grains of flowers of sulphur night and morning for six weeks.—*Gazette Médicale*, copied from the *Oesterreichische Medicinische Wochenschrift.* What would a dose or two of purgative medicine have done in this case?—[TR.]

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, November 10, 1843.

W. D. Wheeler.—J. F. Adcock.—G. C. H. Wigan.—J. B. Bramwell.—J. S. Steel.—W. Fergus.—C. Heatley.—P. Royle.—W. H. Michael.—T. Collingwood.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, November 4, 1843.

Small Pox	2
Measles	34
Scarlatina	66
Hooping Cough	51
Croup	11
Thrush	3
Diarrhœa	19
Dysentery	7
Cholera	1
Influenza	6
Ague	0
Remittent Fever	1
Typhus	41
Erysipelas	5
Syphilis	0
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	146
Diseases of the Lungs and other Organs of Respiration	322
Diseases of the Heart and Blood-vessels	25
Diseases of the Stomach, Liver, and other Organs of Digestion	68
Diseases of the Kidneys, &c.	6
Childbed	8
Paramenia	0
Ovarian Dropsy	2
Disease of Uterus, &c.	2
Arthritis	0
Rheumatism	4
Diseases of Joints, &c.	1
Carbuncle	0
Phlegmon	0
Ulcer	0
Fistula	0
Diseases of Skin, &c.	1
Dropsy, Cancer, and other Diseases of Uncertain Seat	114
Old Age or Natural Decay	84
Deaths by Violence, Privation, or Intemperance	19
Causes not specified	11
Deaths from all Causes	1060

WILSON & OGILVY, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, NOVEMBER 24, 1843.

CLINICAL REPORTS OF CASES

TREATED AT THE GLASGOW EYE INFIRMARY.

By William Mackenzie, M.D.

Some account of the epidemic remittent fever prevalent in Glasgow in 1843—*Its resemblance to some of the Dublin epidemics*—*Its identity with the Dublin epidemic of* 1826—*Cases of affection of the eyes resulting from the Glasgow fever of* 1843—*Remarks on the statistics, symptoms, diagnosis, stages, predisposing and exciting causes, prognosis, and treatment of postfebrile ophthalmitis.*

The cases of eye-disease, which I am now about to comment upon, being the result of an epidemic fever which has prevailed in Glasgow during the greater part of 1843, it may be proper to give some account of the fever itself, before proceeding to describe the very serious affection of the eye, to which in so many instances it has given origin.

A remarkable change has taken place in the epidemic constitution of Glasgow during the present year. Exanthematic typhus, that is to say, a continued fever, characterized, along with other symptoms, by an eruption over the body resembling measles, averaging a course of twenty-one days, and proving fatal to an extent of about 10 per cent, has been supplanted by a remittent fever, sometimes attended with petechiæ, but not with the measly eruption, often accompanied with jaundice, its first paroxysm coming to a crisis within seven days, a relapse happening almost invariably, but the patient rarely suffering more than two paroxysms, and the mortality not exceeding 3½ per cent.

This remittent fever has prevailed chiefly from the beginning of June to the end of September; but I am informed that the disease existed as early as September 1842*, although it was then generally regarded as a catarrhal fever or influenza, or as a simple continued fever. Since the first week of October 1843, the number of cases has sensibly decreased. The disease has prevailed only among the poor, and in the ill-ventilated and filthy parts of the town. Any cases which have occurred among the better ranks have generally been traced to the communication of the individuals seized, with patients in those parts of the town where it abounded. Among the poor, no febrile disease, that I am aware of, has spread to the same extent. Since January, probably 15,000 persons have been affected with it in Glasgow.

Symptoms of the fever.—The disease commences with the usual symptoms of fever—rigors, headache, and sickness. A striking feature is the frequent and excessive vomiting, or straining to vomit, attended by pain throughout the whole body, somewhat resembling rheumatism. There are often no premonitory symptoms, the attack being very sudden, and marked by excessive weakness. One little boy, whom I saw, was seized on the street, and fell down, so that he required to be carried home. In some of the cases, the disease resembles very much sea-sickness in its accession, both in respect to the prostration of strength by which the vomiting is accompanied, and the total indifference of the patients whether they live or die.

The pulse, in general, is not greatly accelerated, averaging about 100. The tongue is not much loaded, but rather clean; after a time it becomes brown and dry. Especially in the night, the patient is delirious; he is often affected with subsultus tendinum; he cannot sleep, tosses continually, and insists on getting up.

* For a number of facts regarding the fever, I am indebted to Dr. Hugh Kennedy, one of the District Surgeons.

Epistaxis in some, and jaundice in others, are of frequent occurrence. When the disease attacks women about the menstrual period, the discharge is very copious; and almost all the women in a state of pregnancy, who are seized, abort, if in the early months, or have premature labour, if farther advanced. If pregnant women, affected with the fever, go the full time, sometimes the child is dead; or, if born alive, the mother has no milk, and has a troublesome and lingering recovery, while the child generally dies for want of support, or perhaps from being affected with the fever.

At the height of the disease, the symptoms are the same as at the beginning, only of greater violence. A convulsion-fit is not an uncommon thing immediately before the crisis.

There is no certain period when the first crisis happens. The patient is generally several days ill, say five or six, when a decided change takes place by profuse perspiration during the night, generally preceded by a severe rigor. Next morning the patient expresses himself as if in a new world; the tongue has become moist, the thirst is greatly abated, and he is free from sickness and headache. In old people, there is little or no perspiration at the crisis; but the change is at once observed by the more agreeable expression of the countenance, and the manner of speaking.

Some patients have a very short remission, and others have one of considerable length. In some it lasts only for three or four days; in others for two or three weeks. Very few escape a return of the fever. Whether they get up, and perhaps go out of doors, or confine themselves closely to bed, nineteen out of twenty relapse. Where the first attack is mild, the second is generally more severe, and *vice versâ*. If any improper freedom be used in diet during the remission, the second attack is generally more severe than the first.

The relapse occurs with the very same symptoms as the original attack. The patient, whom the day before we had left to all appearance convalescent, we now find again in the height of the fever; he is excessively weak, and his countenance is often shrunk to such an extent, as to remind one of the collapsed state in malignant cholera. His skin is covered with a clammy disagreeable perspiration.

The general duration of the second attack is much about that of the first, the second crisis taking place sometimes in two or three days, but more commonly not before four or five. If there be any difference in the symptoms of the first and second attacks, it is in the pains throughout the body being of greater severity in the second. There is also considerable pain in micturition. Dysentery sometimes attends the second attack, traceable not unfrequently to the use of spirits during the remission.

A second or third relapse is rare; but I am informed that some patients who had the disease about four months ago, with its paroxysmal character well marked, and who therefore thought themselves secure, have again been seized with it, and gone through all its stages a second time—a circumstance which, along with others already mentioned, serves to distinguish this fever from exanthematic typhus.

Various sequelæ are observed to arise from the present fever; such as pains in the joints, want of power in the extremities, œdema of the feet, enlargement of the glands about the neck, boils in different parts of the body, and long-continued debility. But the most remarkable is the amaurotic and inflammatory affection of the eye, afterwards to be described.

Treatment of the fever.—A question naturally occurs, whether this disease can be checked at the commencement by any particular mode of treatment; such as by emetics. So far as I have learned, attempts of this kind have been unsuccessful.

The treatment which has generally been adopted has been simple and symptomatic, consisting in perfect rest in bed, cold fomentations to the head, shaving the scalp, the application of leeches to the temples, and sometimes small blisters; turpentine cloths and mustard poultices have been applied to the epigastrium, some recommending abstinence as much as possible from drink, as drinking seemed to them to provoke the vomiting; others giving effervescing liquids, as soda water and ginger beer; keeping the bowels gently open by castor oil, avoiding drastic purges; in cases of jaundice, small doses of blue pill frequently repeated, and blisters over the liver; checking dysentery by castor oil and laudanum; where there was much debility, putting the patient on wine and quina; and after the head symptoms were relieved, giving Dover's powder for the pains throughout the body.

On the question, whether quina prevents the relapse, I find there is a diversity of opinion; some practitioners finding it effectual for that purpose, but the generality either not trying it at all, employing it only in small doses, or finding it inefficacious. Wine, even in large quantities, does not prevent the relapse.

This fever appears to be highly contagious. Where many individuals, ill-fed and ill-clothed, live together in small, dirty, and ill-ventilated apartments, it has generally gone through the whole of them, young and old, in rapid succession. If the system of

those exposed to it is farther depressed by a fit of drinking, they are almost certain to be affected with the fever soon after.

It appears to have supplanted in a great measure all other diseases, especially typhus fever and dysentery.

The smallness of the mortality, compared with the severity of the symptoms, and the debility it leaves behind it, is a matter of surprise. Considering all the circumstances, it is wonderful that there have not been six deaths for every one that has occurred. The deaths have been chiefly among the aged, young children, and persons of broken-down constitutions.

This disease is never observed to merge into exanthematic typhus.

I have not witnessed the inspection of the body of any one who has died of this fever. I am informed that appearances of congestion have been met with in the head, great redness of the mucous coat of the bowels, especially in the vicinity of the cæcum, the spleen resembling apoplectic lung, the gall-bladder gorged with bile, &c. The optic nerves and retinæ should be carefully examined.

I am unable to say whether this species of fever has ever been previously known in Glasgow. That it has at different times prevailed in Ireland is rendered highly probable from the fact that the course observed by some of the Irish epidemics corresponds exactly with that of the fever now present in Glasgow, while the complete identity of this fever with that which prevailed in Dublin in 1826, is proven by the exact similarity of the affection of the eye, observed as a sequela in both instances.

In Rutty's History of the Diseases of Dublin during forty years, we meet with several instances of an epidemic of the same character with that now under consideration. Thus in July, August, September, and October, 1739, a fever prevailed, which was "attended with an intense pain in the head. It terminated," says he, "sometimes in four, for the most part in five or six days, sometimes in nine, and commonly in a critical sweat: it was far from being mortal. I was assured of seventy of the poorer sort at the same time in this fever, abandoned to the use of whey and God's good providence, who all recovered. The crisis, however, was very imperfect, for they were subject to relapses, even sometimes to the third time." (p. 75.) He describes the same remittent fever as occurring also in 1740, 1745, 1764, and 1765; noticing as a circumstance of the disease in 1765, that the bowels were in some instances remarkably affected.

There appears considerable resemblance between the present fever and that described by Dr. Stoker, as prevailing along with typhus gravior in Dublin in 1816. He speaks of it as a *typhus mitior*, its usual course being from three to nine days, generally terminating on or before the seventh day, but very apt to relapse on the third or fifth day from the favourable change.

The Dublin epidemic of 1826, with which the present fever corresponds so exactly in its effects on the organs of vision, was also a remittent fever, as appears from the accounts published* of it by Dr. Reid and Dr. O'Brien. It was often attended by jaundice, and by pains in the bones; its crisis happened generally about the seventh day; the patients were very apt to relapse; the number attacked was very great, but the mortality comparatively small;—in all which particulars its analogy to the present Glasgow fever is borne out. The following extracts from Dr. O'Brien's Report might be applied to the disease now prevailing in this city, with scarcely any modification:—

"The other species of fever, or that of the new constitution, which constituted the bulk of this epidemic, was one of short periods, terminating in three, five, seven, or nine days, but the second of those periods was the most frequent." * * * "In this fever the chain of morbid actions was rapidly formed and rapidly terminated, and the disease developed itself with energy from the commencement. The access was sudden, and usually came on at mid-day. The person previously in perfect health would then be seized with sickness at stomach, headache, pain in the small of the back, and chilliness. On the approach of evening all these symptoms increased, and the febrile paroxysm was fully formed; the chilliness increased to a rigor, and the nausea to vomiting, which harassed the patient for the first three or four days of his fever in the form of an empty straining, and frequently continued through its whole course. On the evening of the fifth or seventh days the *exacerbatio critica* commenced, which, mostly with the intervention of a rigor, but very frequently without this symptom, terminated in a profuse perspiration, which continued through the night, so that on the following morning the crisis was complete, and we generally found the patient convalescent. We frequently received the glad tidings from himself in the following words: 'Sir, I got the *cool* last night.' The *cool*, however, was sufficiently visible in his countenance before he opened his lips; but unfortunately in many instances it proved only a delusive truce to his sufferings. The patient was destined, perhaps, to be harassed by one, two, or three relapses, which pro-

* Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, vol. v. pp. 266, 512. Dublin, 1828.

longed the whole duration of his illness even beyond that of the most protracted typhus. In fact, the liability to frequent relapses was one of the most striking characteristics by which this fever was distinguished from all previous epidemics, at least which happened in our time."

"Relapses, generally speaking, were milder and shorter than the original fever; but to this many exceptions occurred. The general symptoms of the summer variety of this fever, in addition to those already mentioned, were—acute headache; delirium, always active, sometimes phrenitic; rapid and hard pulse; white tongue with florid edges, but sometimes natural; muscular and arthritic rather than deep-seated pains, or, as they are termed, 'pains of the bones,' not accompanied, however, by swelling of the joints, except in a few instances; the skin in many cases of a light yellow tinge, and sometimes, though rarely, assuming the intense icteroid yellow, characteristic of jaundice and true yellow fever."

"The pathological exposition of this appearance the author believes to be simply this, that irregular jaundice supervenes on fever in persons who have previously laboured under disorder of the biliary system."

"Between this form and the true yellow fever of certain hot climates there is at least this specific difference, that in the latter the yellow colour of the skin is pathognomic and general, though perhaps not a universal symptom, while in the endemic fevers of this country it is a rare and accidental occurrence, arising from an accidental cause. There exists, probably, the same analogy between this form of fever and the true yellow fever, as between typhus attended with glandular swellings, and the plague."

Typhus fever is sometimes followed by muscæ volitantes, or even by amaurosis, and in some rare instances by phlebitic ophthalmitis. Certainly no febrile disease with which we have been hitherto acquainted in this country is followed by such an inflammatory affection of the eye, as that which I am about to describe. I have known the disease which is called hay fever, followed by intermittent ophthalmia, of iritic character. Dr. Lawrie informs me that remittent fever in India is sometimes followed by corneitis, and sloughing of the cornæ.

I shall now select, from the journals of the Glasgow Eye Infirmary, a few cases illustrative of the affection of the eye, which has appeared as a sequela of the remittent fever now prevailing. From the 8th August to the 31st October, when I finished my quarterly period of attendance, 36 cases of this description were taken on the list. The general subjects of the affection in question have been from 17 to 20 years of age; but it has spared neither young children nor old people. The youngest out of the 36 was 18 months old; the oldest was 56 years. The general character of the disease has been partly amaurotic and partly inflammatory. In by far the greater number of cases the eyes attacked had been previously healthy, but in some instances they had suffered from other diseases, and in one case they were already in a great measure disorganized.

Case I.—*Amaurosis and ophthalmitis after remittent fever—treated by leeches, calomel and opium, belladonna, blisters, and quina—complete recovery.*

No. 13185—Aug. 8th, 1843. Margaret Spence, aged 12, was seized with remittent fever, which she calls influenza, nine weeks ago. Right eye became red three weeks ago. Conjunctiva still somewhat red; pupil dilated, and does not contract readily on exposure to light; vision of right eye so dim, that she does not see the eyes of a person sitting before her. Circumorbital pain. Pulse 108.

Hirud. vj. ad temp. dext.

℞ Subm. Hydr. gr. iv.; Pulv. Opii, gr. j. M. ft. pulv. hor. som. sumend.

Cras mane Sulph. Magn. ℥ss.

9th.—Less pain; vision rather better.

Extr. Bellad. ad palp. dextr.

℞ Subm. Hydr. gr. xij.; Opii, gr. ij.; Sacc. Alb. ℈j. M. opt. et divide in pulv. xij. Cap. j. 8â qq. horâ.

10th.—More pain.

Hirud. vj. ad palpebr. dext.

12th.—Eye easier, and less red. Vision rather better. Right cornea more than naturally flexible.

Rep. Sulph. Mag. Vesicat. pone aur. dextr.

13th.—Pain subsides. Vision improves.

15th.—Sees best when she looks over her nose.

16th.—Rep. Belladon. Vesicat. ad temp. dextr.

17th.—Pupil widely dilated, and vision consequently more obscure.

18th.—Pupil not so widely dilated. Vision improved. No pain.

21st.—Cap. pulv. Subm. Hyd. et Opii, j. indies tantum. Rep. vesicat. pone aur. dextr.

27th.—Vision much improved; pupil of natural size. Has caught cold, and complains of pain in the chest.

Pediluv. tepid. vespere. Omit. medicamenta.

28th.—Hirud. vj. ad pectoris partem dolentem. Cap. Ol. Ricini, ℥ss.

29th.—Relieved by the leeches.
30th.—Is confined with measles.
Sept. 6th.—Dimness of sight of right eye still continues.

Vesicat. parvum ad temp. dextr.

13th.—Bowels loose.

Cap. q. p. Tinct. Opii, gtt. x.

15th.—Bowels still loose.

℞ Opii, gr. j.
Cretæ ppt. ʒij. M. et div. in pulv. xij.
Cap. j. post sedes singulas liquidas.

24th.—Cap. Sulph. Quin. gr. j. ter indies.
Oct. 15th.—Says her eye is perfectly well.

Omit. remedia.

CASE II.—*Retinitis and amaurosis after remittent fever—complete cure by leeches, calomel and opium, blisters, and quina.*

No. 13186—Aug. 8th, 1843. Margaret Paterson, aged 11, had remittent fever in the end of June. Eight days ago, right eye appeared red. The conjunctiva and sclerotica are moderately injected; the iris is of a green hue; the pupil somewhat dilated, and very sluggish; the retina retains merely a perception of light and shade. No pain of head; pulse 120; tongue clean.

Hirud. vj. ad. temp. dextr.
℞ Subm. Hydr. gr. iv.; Pulv. Opii. gr. j. M. ft. pulv. hor. som. sumend.
Cras mane Sulph. Magn. ʒss.

9th.—Tells a pen and other objects with right eye.

Rep. pulv. et Sulph. Magn. Vesicat. pone aur. dextr.

10th.—Eye painful; much lacrymation; vision again worse.

Hirud. vj. ad palp. dextr.

14th.—Symptoms subside. Sees best when she looks dextrad.

℞ Subm. Hydr. g. xij.; Pulv. Opii, gr. j.; Sacc. Alb. ℈j. M. div. in pulv. xij.
Cap. j. o. n.

15th.—Vesicat. pone aurem dextr.

19th.—Has by mistake been taking a powder thrice a day.

Cap. pulv. j. o. n. tantum.

22d.—Right pupil not so much expanded as left. Vision improves slowly; is still most defective when she looks sinistrad.
25th.—Vision continues to improve.

Omit. pulv. Subm. Hydr. et Opii.
Cap. Sulph. Quin. gr. j. ter indies.

27th.—Still improves.
Sept. 1st.—Vision much improved.
3d.—Bowels confined.

Cap. Pulv. Jalap. Comp. gr. xv.
6th.—Cont. Quina.

12th.—Continues to improve.
20th.—Says her eye is quite well.

CASE III.—*Iritis after fever—treated with quina, leeches, and vesication.*

No. 13223—Aug. 26th, 1843. Catherine M'Donald, aged 55, has been labouring under the epidemic fever now prevalent. Right eye affected with iritis. Iris discoloured; pupil hazy; vision dim; nocturnal pain in eyeball, preventing sleep. Pulse 96, small.

Belladon. ad palp. dextr.
Cap. Sulph. Quin. gr. ij. 8vâ qq. horâ.

29th.—Pain not relieved.

Hirud. vj. ad palp. dextr. Cap. Ol. Ricini, ʒj. Hodie omit. Quina.

Sept. 1st.—Eye easier; vision clearer.
8th.—Vesicat. pone aur. dextr.
14th.—Much improved.

CASE IV.—*Ophthalmitis after fever—treated by venesection, leeches, calomel and opium, belladonna, vesication, and quina—muscæ volitantes left as a sequela.*

No. 13254—Sept. 7th, 1843. James Nairn, aged 18, had epidemic fever in July last. After twelve days had a crisis, but relapsed after other four days, with shiverings, and pain in the bowels. Eleven days ago symptoms of iritis affected right eye. Sclerotica injected; iris, naturally hazel, of a darker colour than that of opposite eye; pupil contracted and irregular; sight so dim that he cannot read the large letters on the Infirmary card. Supra-orbital pain, increased during the night, and preventing sleep. Has applied four leeches, without relief.

Venesectio. Belladon. ad palp. dextr.
Cap. pil. Subm. Hydr. gr. ij., et Opii, gr. ss. i. 8vâ. qq. horâ.

8th.—Pain relieved; pupil somewhat dilated; vision rather clearer.

9th.—Hirud. vj. ad temp. dextr.
10th.—Gutta Sol. Nitr. Argent. (gr. x. ad Aq. ʒj.) ad ocul. dextr. Vesicat. pone aur. dextr.

12th.—Eye easier; pupil more dilated.
14th.—Much improved.
17th.—Mouth begins to be affected; eye much better.

Cap. pil. j. indies tantum.

20th.—A musca volitans before right eye. In other respects better.

25th.—Omit. pil. Cap. Sulph. Quin. gr. j. ter indies.

Oct. 6th.—Eye free from inflammation; still complains of muscæ volitantes before right eye.
24th.—Says that the vision of right eye is as clear as that of left, but he is still troubled with muscæ volitantes.

Omit. Quina.

CASE V. — *Epidemic fever — abortion — iritis — cured by belladonna, quina, and purgatives.*

No. 13260—September 9th, 1843. Mary Quin, aged 29, was seized with epidemic fever about a month ago. This was followed by an abortion in the fourth month. Eyes have been affected with slight rheumatic iritis for twelve days. Pulse 96. Bowels regular.

Belladon. ad palpebras. Cap. Sulph. Quin. gr. j. octavâ qq. horâ.

11th.—Right pupil a little dilated, and vision of that eye somewhat clearer.

Cap. Pulv. Jalap. Comp. 3ss.

12th.—Right pupil more dilated.

14th.—Inflammation abates.

18th.—Rep. pulv. purgans.

CASE VI.—*Epidemic fever, followed by capsulitis of the crystalline and cornea.*

No. 13263—September 10th, 1843. John Collins, aged 31, a travelling dealer in stoneware, had the epidemic fever about six weeks ago. Eight days ago, when travelling by railway, supposed some particles of coke to have got into his right eye. Conjunctiva and sclerotica of that eye very slightly injected; iris of a lighter colour than that of opposite eye; both irides greenish; makes no complaint of left eye, the vision of which is good; right pupil natural in size; its motions limited and slow; vision of right eye so dim that with difficulty he tells one finger from another with it, when held close before him; pupil appears slightly muddy, and on concentrating the light upon it with a convex lens, a reddish wreath appears on the anterior crystalline capsule, just within the verge of the pupil; says that for two nights the pain was pretty severe in right eyeball. Pulse 84, small; tongue white.

Belladon. ad palp. dextr. Pulv. urg. ℈j.

11th.—Right pupil widely dilated; the red wreath is now situated half way between the centre and the circumference of the pupil; a number of minute spots visible on the internal surface of the cornea, especially towards its lower edge; vision considerably clearer.

Cap. Pil. Hydrarg. j. m. et v.

CASE VII.—*Epidemic fever, followed by ophthalmia of catarrho-rheumatic character, relieved by venesection, belladonna, purgatives, and calomel and opium.*

No. 13282—September 19th, 1843. Ann Morison, aged 41, had epidemic fever in July, since when has been constantly troubled with pain in left side of head. Left eye affected with ophthalmia of catarrho-rheumatic character. Pulse 72; tongue foul; bowels costive; no sleep, from the hemicrania. Applied four leeches with some relief.

Belladon. ad palp. sinistr.; Venesectio. Pulv. Purg. ℈j.

20th.—Blood buffy; pain much relieved; pupil irregularly expanded.

Cap. Pil. Subm. Hydr. gr. ij. et Opii gr. ss. m. et v.

21st.—Eye free from redness.

23d.—Cap. Sulph. Magnes. ℥j. Hodie omit. pil.

CASE VIII.—*Epidemic fever — premature labour — amaurosis and ophthalmia — cured by bleeding, mercury, blisters, and belladonna.*

No. 13290—Sept. 20th, 1843. Catherine Auld, aged 28, was seized with the prevailing fever two months ago. Relapsed, and had a premature confinement at the eighth month. Since her convalescence, sight of both eyes has become dim, and the right eye is inflamed.

Hirud. vj. ad temp. dextr.

21st.—Hemicrania on right side.

Belladon. ad palpebras. Venesectio. Cap. pil. Subm. Hydr. gr. ij. et Opii, gr. ss. m. et v.

22d.—Pain relieved. Right pupil irregularly dilated, being tagged to capsule at nasal edge.

23d.—Pain increased.

Rep. venesectio.

24th.—Pain relieved.

Omit. pil. Vesicat. pone aur. dextr.

26th.—Cap. Ol. Ricin. ℥j.

27th.—Hirud. vj. ad temp. dextr.

29th.—Eye improves. Still complains of supra-ocular pain.

Vesicat. ad temp. dextr.

October 2d.—Cap. pil. j. indies tantum.

15th.—No pain nor inflammation. A lace-work of muscæ volitantes before each eye, which, however, does not prevent her from reading small type.

Cap. Sulph. Quin. gr. j. ter indies. Omit. pil.

CASE IX.—*Epidemic fever—iritis—cured by combination of quina and calomel.*

No. 13330—October 5th, 1843. Agnes Jeffray, aged 17, was seized with the prevailing fever six weeks ago. Being convalescent after a relapse, began to sew, which has brought on inflammation of right eye. Iris of a green colour; pupil contracted; vision dim.

Belladon. ad palp. dextr.

℞ Sulph. Quin. Subm. Hydr. aa. gr. xij.

Sacc. Alb. ℈j. M. et div. in pulv. xij. Cap. j. octavâ qq. horâ.

6th.—Pupil widely dilated. Eye easier.
7th.—Eye free from inflammation.
10th.—Continues to improve.

CASE X.—*Ophthalmia interna after fever—yields slowly and imperfectly to quina.*

No. 13333—October 8th, 1843. William Armour, aged 17, is a fortnight convalescent from epidemic fever. Left iris presents a darker colour than natural. Pupil rather hazy. Sclerotica slightly injected. Vision dim.

Belladon. ad palp. sinistr. Cap. Sulph. Quin. gr. j. ter in dies.

10th.—Cont. remedia.
12th.—Has had more pain.

Hirud. vj. ad palp. sinistr.

15th.—Still occasional attacks of pain. Vision improves.

Cap. Sulph. Quin. gr. ij. 8vâ. qq. horâ.

22d.—Pain entirely gone. Vision of left eye still very dim.

Cont. Bellad. et Sulph. Quin.

27th.—Vision does not improve.

Omit. Sulph. Quin. Cap. pil. Subm. Hydr. gr. ij. et Opii, gr. ss. octavâ qq. horâ.

29th.—Vision clearer, but still so imperfect that he cannot with left eye make out characters an inch long. Iris of a greenish hue, and bolstered forwards towards cornea. Eyeball preternaturally flexible.

Abrad. latus cap. sinistr. et appl. vesicat. pone aurem. Cont. Belladon. et Pilulæ.

CASE XI.—*Ophthalmia interna after fever—passes from right to left eye—yields slowly to depletion, mercury, quina, belladonna, and vesication.*

No. 13339—October 11th, 1843. Grace Arnott, aged 15, is two months convalescent from epidemic fever. About ten days ago, right eye became inflamed. Sclerotica intensely injected; iris of a dull green colour; pupil of natural size, moveable, but very hazy. Vision so dim that with right eye merely perceives light and shade. Pulsatory pain in eyeball; no circumorbital pain. Pulse 84. Occasional rigors. Has been working in a cotton mill, and in a high temperature.

Hirud. vj. circum oculum dextr. Cap. Pil. Subm. Hydr. gr. ij. et Opii, gr. ss. octavâ qq. horâ.

12th.—Belladon. ad palp. dextr. Abrad. latus dextr. capit. et applic. vesicat.

13th.—Venesectio.

14th.—Blood not buffy. Pain not relieved. Pupil irregularly dilated.

Cap. Sulph. Quin. gr. iij. octavâ qq. hor. Cont. Pil.

15th.—Bowels bound.

Cap. q. p. Sulph. Magn. ℥j. Cont. Quin. et Pil.

16th.—Pain less. Vision clearing. Four or five stools, from the salts. Pupil somewhat dilated; irregular; rather clearer.

17th.—More pain and lacrymation during the night. Vision continues rather clearer.

Omit. Pil.

18th.—Rep. Hirud.

19th.—Vesicat. ad temp. dextr.

20th.—Mouth sore.

21st.—Through the night, left eye became affected with pain and redness. Vision of it somewhat dim. Right eye improves. Had rigors during the night, when the pain shifted from the right to the left temple.

22d.—Left pupil widely dilated. Right eye improves.

Belladon. ad palp. dextr. tantum.

23d.—Appearance of right eye greatly better.

24th.—Left eye more affected, being red and painful.

Hirud. vj. circum oculum sinistr.

25th.—Pain of left eye relieved by the leeching. Right eye free from redness. Iris more of its natural colour; pupil irregularly dilated, presenting two tags to capsule at its upper edge.

Cont. Sulph. Quin. et Belladon.

26th.—Both pupils widely dilated; right still irregular. Vision of right eye still very dim. No pain. No rigors.

29th.—Eyes free from redness and pain. Vision of right eye so dim that she cannot make out letters an inch long; with left eye reads the smallest type on infirmary card. Right pupil still a little irregular. Left cornea preternaturally flexible. Mouth well.

℞ Subm. Hydr. gr. xij.; Sulph. Quin. gr. xxiv. M. et div. in pulv. xij. Cap. j. octavâ qq. horâ. Cont. Belladon. Omit. Alia.

CASE XII.—*Epidemic fever; three relapses followed by amaurosis and ophthalmitis; symptoms yield to quina, leeches, and mercury.*

No. 13346—16th October, 1843. John Harvey, weaver, æt. 44, had epidemic fever twelve weeks ago. Had three relapses. Found vision of left eye to become dim about a fortnight ago. It is now so deficient that he merely perceives light and shade with it. Four days ago the eye began to get red. Sclerotica much injected; a narrow whitish ring between sclerotica and cornea; cornea

rather hazy; iris greenish; pupil contracted, irregular, and very hazy. Supra-ocular pain, increased during the night, and at that time preceded by rigors. Much lacrymation. Muscæ volitantes. Pulse 72; bowels regular. Thinks the affection of his eye arose from his going into his cold shop to work.

Belladon. ad palp. sinistr. Cap. Sulph. Quin. gr. iij. octavâ qq. horâ.

17th.—Eye easier. Less lacrymation.

18th.—Vision rather clearer.

Vesicat. pone aur. sinistr.

19th.—Symptoms abate.

21st.—Supra-orbital pain still considerable. Vision clearer.

Hirud. vi. ad palp. sinistr.

23d.—Pain somewhat abated since the leeching. Pupil still contracted, and vision dim.

Vesicat. parv. ad part. frontis dolent.

25th.—Pain relieved. Eye remains in much the same state.

Cap. Pil. Subm. Hydr. gr. ij., et Opii. gr. ss. octavâ q. q. horâ. Omit. Quin. Cont. Belladon.

30th.—Eye improves. With some difficulty makes out letters an inch long. Mouth sore.

Cap. Pil. j. indies tantum.

CASE XIII.—*Ophthalmitis after fever: being neglected, ends in synechia posterior, and almost total loss of sight; slow improvement under the use of quina and calomel.*

No. 13355—18th October, 1843. Bridget Carey, æt. 50, had epidemic fever four months ago. Three months ago, sight began to fail. Both pupils are irregular, and the lenses very hazy. Vision, especially of the left eye, nearly limited to a perception of light and shade. Gropes like an amaurotic, and has a most melancholy expression. To relieve the burning heat of eyes, poulticed them for two months. This has produced entropium of each lower eyelid. Pain in the temples, especially during the night. Tongue clean; bowels bound. Back of pharynx ulcerated. Says the throat has been sore since before taking the fever. Has used only purgatives, such as salts and castor oil.

Belladon. ad palpbras. Vesicat. ad tempora.

℞ Subm. Hydr. Sulph. Quin. aa. gr. xxiv.; M. et div. in pulv. xij.; Cap. i. octavâ qq. horâ.

19th. — Pain in head somewhat less. Bowels griped. A stripe of court-plaster applied across each lower lid.

20th.—Complains much of pain in left side of head.

21st.—Entropium less troublesome.

23d. — Mouth sore. Pain subsiding. Vision appears to be stationary.

Omit. Subm. Hydr. Cont. Quina.

24th.—Gargarism. Alumin.

Cap. h. s. Pulv. Dover. gr. xij.

25th.—Bowels loose.

Cap. Ol. Ricin. ℥j.; Cont. Quin. et Pulv. Dover.

26th.—A good night. Pain of head much less. There appears no improvement in the eyes.

28th.—Right pupil irregularly dilated. Distinguishes a pen and other objects with right eye, being the first sign of improvement in vision since her admission.

Cont. Bellad. Quin. et Pulv. Dover.

29th.—Is much less troubled with the entropium. Both pupils very irregular, presenting numerous adhesions to capsules. Appears to have merely perception of light and shade with left eye. Vision of right eye improves. Still complains of pain in left side of head.

Abrad. latus cap. sinistr. et. appl. vesicat. ad partem dolentem. Cont. alia.

30th.—Pain relieved by the blister.

CASE XIV.—*Remittent fever, followed by ophthalmitis: cured by belladonna, purging, leeches, and mercury.*

No. 13375—25th October, 1843. Jane M'Naught, æt. 13, was seized with remittent fever five weeks ago. For eight days past the left eye has been inflamed. Pupils irregular; vision dim; nocturnal pain; bowels bound.

Belladon. ad palp. sinistr. Pulv. Purg. gr. xv.

26th.—Three stools from the powder. No sleep on account of the pain.

Cap. Pulv. Dover. gr. viii. h. s.

27th.—A rather better night. Sclerotica very vascular.

Hirud. vi. ad palp. sinistr.; Cap. Pil. Subm. Hydr. gr. ij.; et Opii. gr. ss. m. et v.

28th.—Eye easier; no pain in the head; a good night; sclerotica less injected; pupil pretty clear; vision more distinct; bowels regular.

Cont. Belladon. et Pilulæ. Vesicat. pone aur. sinistr.

30th.—Pupil widely dilated.

Ablue Belladon.

Nov. 1st.—Continues to improve.

CASE XV.—*Severe ophthalmitis after remittent fever; relieved by venesection and mercury.*

No. 13378—28th October, 1843. Hugh Leech, æt. 26, was seized with remittent fever about eight weeks ago. First attack lasted about ten days; the remission three days; and the second attack seven days. During his convalescence, was sleeping in a very uncomfortable place, and much exposed to cold. On the morning of the 25th, awoke with great pain in right eye. The sclerotica is intensely red, the iris has assumed a green colour, the cornea is slightly hazy, and the pupil very much so; it is considerably contracted, and the vision of the eye is limited to a perception of light and shade. Pulse 108. Tongue white. Underwent no treatment for the fever.

Belladon. ad palp. dextr. Venesectio. Cap. Pulv. Subm. Hydr. gr. ij.; et Opii. gr. ss. octavâ qq. horâ.

29th.—Blood somewhat buffy; felt relieved by the bleeding; pulse 84; sclerotica not so red; pupil not so hazy; vision clearer.

Abrad. latus capit. dextr. et appl. vesicat. pone aurem.

30th.—Blisters have been applied behind both ears.

Nov. 1st.—Mouth sore. Can read the numbers on the tickets, which are about an inch long.

Cap. Pulv. vesp. tantum. H. S. cap. Pulv. Dover. gr. viij.

CASE XVI.—*Remittent fever; abortion; ophthalmitis: relieved by leeching and mercury.*

No. 13379—28th October, 1843. Flora Reynolds, æt. 22, was seized with epidemic fever six weeks ago. Says the attack lasted two weeks, and that she had no relapse. Five weeks ago had a miscarriage at the third month, with excessive discharge. Menstruated a week ago, and more profusely than common. Says her feet and legs became dropsical during her convalescence. Was sleeping in an apartment with broken windows, and ten days ago was attacked with pain in left eye, which now presents the usual symptoms of ophthalmitis post febrem, the sclerotica being injected, the iris discoloured, and vision very dim. No sleep, from hemicrania; pulse 84; tongue clean; bowels regular.

Hirud. vj. ad palp. dextr.

℞ Subm. Hydr. gr. v.; Pulv. Dover. gr. xij. M. ft. pulv. h. s. sumend. Cras mane, Sulph. Magnes. ℥j.

30th.—Pain almost gone. Vision clearer.

Belladon. ad palp. sinistr.; Cap. Pil. Subm. Hydr. gr. ij. et Opii. gr. ss. octavâ qq. horâ.

REMARKS.—The cases above related may serve to give an idea of the affection of the eyes, which has in so many instances followed the fever now prevailing, and of the treatment which I have employed for it. I have generally called the disease *ophthalmia post febrem*, but perhaps the appellation of *ophthalmitis postfebrilis* is more correct.

Statistics.—The following are a few statistical facts, which may be worthy of notice:—

Out of the 36 cases which I treated in August, September, and October, 27 occurred in females, and only 9 in males.

The following were the ages of the 36 patients:—Below ten, 2; from ten to twenty, 17; from twenty to thirty, 9; from thirty to forty, 2; from forty to fifty, 3; from fifty to sixty, 3.

In eighteen of the cases, the right eye only was affected; in ten, the left only; and in eight, both eyes, either together or consecutively.

The attack of ophthalmitis occurred at various periods from three to sixteen weeks from the commencement of the fever. In several cases it came on about two weeks after convalescence from the relapse, but generally somewhat later.

The very same disease of the eye occurred after the Dublin epidemic of 1826, and was described by Mr. Hewson*, Dr. Reid†, Dr. Jacob‡, and Mr. Wallace§. The last mentioned author has remarked the greater liability of the right eye to be affected than the left. "Of forty cases," says he, "which I have noted, there were only four who had the disease in the left eye, and only two had it in both." Out of the ten cases in which it happened to me to observe it in the left eye, seven were females. The attack is generally traced to a draught of cold air during the night; it is probably the eye which is exposed which becomes affected, while that belonging to the side on which the patient rests, escapes.

Dr. Jacob has remarked, that the disease occurs much more frequently in young than in old persons. Of thirty cases in which he noted the ages, three only were above 25. He also met with it more frequently in females than males. In the majority of the cases seen by him, the inflammation made its appearance within six weeks or two months after recovery from the fever; in some in-

* Observations on the History and Treatment of the Ophthalmia accompanying the Secondary Forms of Lues Venerea, pp. 34, 109. London, 1814.

† Transactions of the Association, &c. Vol. v. p. 294.

‡ Ib. p. 468.

§ Medico-Chirurgical Transactions, Vol. xiv. p. 286. London, 1828.

stances, however, it appeared before the patients left the hospital, and in others not for four, five, or even eight months,

Symptoms.—The character of the disease appears to be, in the first instance, that of congestion, followed by inflammation of the internal parts of the eye, and especially of the retina, producing great imperfection of sight. This is succeeded by evident inflammation of the iris and sclerotica; the disease extends to the capsule of the lens, and sometimes to the lining membrane of the cornea; there can be little doubt but that the choroid is also inflamed; while the conjunctiva remains in general but slightly affected.

The part which the sclerotica takes in the disease is plain enough, from the intense injection of the blood-vessels which lie on its surface, and which, derived from the muscular and anterior ciliary arteries, are seen running in radii towards the cornea. The change of colour in the iris, the contracted state of the pupil, and the tags of adhesion between the edge of the pupil and the capsule of the lens, show the part which the iris takes in the disease. The internal membrane of the cornea, and the anterior crystalline capsule, especially the latter. are extremely muddy, shewing their participation in the inflammation. The whole walls of the aqueous cell seem in some cases as if coated with a thin layer of lymph, of a yellowish-green colour. The great deficiency of sight is not explicable from the mere muddiness of these parts, and is, besides, often the earliest symptom of the disease, shewing an affection of the retina. At an early period, the pupil is sometimes dilated, and does not become contracted till the inflammation embraces the iris. If not promptly combated by the appropriate remedies, the cornea and sclerotica become preternaturally flexible under the pressure of the finger, showing that the disease has extended to the vitreous body. In one case I found the cornea very flexible in the amaurotic stage, before there was any appearance of inflammation.

At the commencement, it is possible that only the central artery of the retina, and the vasa longa of the hyaloid, may be affected. The irritation and injection speedily spread, in all likelihood, to the short, as well as to the long ciliaries; to the vessels of the ciliary processes, and of the zonula Zinnii; to the vasa brevia of the hyaloid, the vessels of the anterior crystalline capsule, and those of the lining membrane of the cornea; and to the sclerotic network.

The lacrymation is very considerable, and seems to be connected, not so much with the state of the conjunctiva, as with the pain in the interior of the eye-ball. The severe pain in and round the eye, aggravated during the night, is exactly similar to what attends rheumatic and syphilitic ophthalmia, and may partly be ascribed to the pressure exercised upon the ciliary nerves within the eye, by the inflamed parts, partly regarded as a direct neuralgic affection, such as we often meet with in the six branches of the fifth nerve which emerge from the orbit, when there is no evident inflammation present. It is, in general, only after the iris and sclerotica have taken part in the disease, that the patient complains of the ocular and circumorbital pain. So long as the disease is confined to the retina there is little or no pain. Hence the patient is less alarmed than he should be, by the mere dimness of sight, which, indeed, from only one eye being generally affected, may scarcely attract his attention. Even photopsia, in the early stage, is not much complained of; in the last stage, muscæ volitantes form a constant symptom.

Although, in by far the greater number of cases, all the textures of the eye suffer in this disease, on which account it may be designated as an *ophthalmitis*, it sometimes happens that the inflammation is confined to one or two textures only. Thus in Case 6 the anterior crystalline capsule and the lining membrane of the cornea only were visibly affected with inflammation.

The pulse varies from 84 to 120. Frequently rigors occur. The tongue is generally clean and moist. The pain entirely prevents sleep.

Diagnosis.—The present disease is much more extensive, in respect to the number of textures affected, and much more intensive, in so far as the morbid action which is at work is concerned, than rheumatic ophthalmia, or rheumatic iritis; to which, however, in many particulars it bears a resemblance. Yet, along with postfebrile ophthalmitis, we have neither the bounding pulse, the hot skin, nor the white and loaded tongue, which attend inflammation of the sclerotica and iris from mere exposure to cold. Neither is the blood drawn from a vein so buffy. The pain is not less distressing. Vision is much sooner, and much more seriously involved.

Mr. Wallace considers this affection of the eye as bearing so very striking a resemblance to syphilitic ophthalmia, that the one cannot be distinguished from the other without particular attention to the history of the case. The absence of the tawny-reddish border which surrounds the pupillary margin of the iris, and there being tubercles on the iris in postfebrile ophthalmitis, will serve to distinguish the two diseases.

The acuteness of the present disease will discriminate it from scrofulous iritis, to which, particularly in the appearance of the lens, it bears considerable resemblance, as

well as in the degree in which the retina is affected.

In some instances, postfebrile ophthalmitis bears a considerable resemblance to catarrho-rheumatic ophthalmia. Onyx, so frequent in the latter disease, I have not witnessed in the former. In one case I observed a considerable portion of the conjunctiva corneæ ulcerated, but never the ulcer which affects the proper substance of the cornea, and which is so characteristic of the catarrho-rheumatic disease.

The disease to which postfebrile ophthalmitis bears the nearest resemblance is sympathetic ophthalmitis; which results so frequently from incised and lacerated wounds of the edge of the cornea and sclerotica, and consequently of the annulus albidus of the opposite eye. The cause of the great similarity is, that in both cases the inflammation commences in the retina, advances to the iris, embraces all the internal textures of the eyeball, and ends, if neglected, in closure of the pupil, opacity of the crystalline, softening of the globe, and insensibility to light. The slightest inquiry into the history of the case will in either instance elucidate the origin of the affection.

Stages.—Mr. Wallace has described this disease as presenting two stages; the first amaurotic, and the second inflammatory. The cases above detailed sufficiently illustrate the accuracy of Mr. Wallace's description. "During the first stage," says he, "there exist amaurotic symptoms alone; and in the second stage, to the amaurotic symptoms are superadded the symptoms of inflammation. The length of time that the amaurotic symptoms exist before the occurrence of external redness, or of the visible symptoms of inflammation, is extremely uncertain, as also the period after fever at which the amaurotic symptoms commence. On many occasions the amaurotic symptoms, particularly a slight dimness of vision, with muscæ volitantes, have commenced at or even before the time of convalescence from fever, and yet the inflammatory stage has not supervened for weeks or even months; while on other occasions the dimness of vision has not commenced for several days, weeks, or even months, after the febrile attack, and has then been immediately followed by the symptoms of inflammation. It is to be particularly observed that I have never seen a case in which, upon strict inquiry, amaurotic symptoms, more or less strongly marked, have not preceded the inflammatory symptoms. This is, in fact, one of the most remarkable characters of the disease. It is also to be noticed that a similar distinction of symptoms is observable during amendment, for it uniformly happens that the inflammatory symptoms subside a longer or shorter time before the amaurotic symptoms disappear, and often before they are diminished in severity."

The first and second cases, which I have related, bore, not merely at the commencement, but all along, much more the aspect of amaurosis than of ophthalmitis. In one case which I saw, the patient was suddenly struck blind of the affected eye. In another case, already referred to, along with amaurotic symptoms, the cornea had become flexible, and, no longer apprehensive of inflammation supervening, I had commenced the use of quina and blisters, when suddenly pain and redness set in. I have met with several cases in which, for days, the principal symptoms have been pain in and round the eye, and dimness of sight. In other cases, there has been redness of the eye from the very commencement.

Predisposing and exciting causes.—That an opportunity is left for the disease of the eye by the fever is plain; there may even be grounds for suspecting that the fever may have left the circulating fluids in an altered state, favourable for the production of the local complaint. However this may be, the affection of the eye is generally traceable to some exciting cause, and especially to cold. Sleeping in an apartment with broken windows, working in a cold damp shop, and washing the head with cold water, are mentioned in the cases as exciting causes. Using the eyes too early in sewing is another.

Prognosis.—The recovery is tedious. In the majority of cases, two months of uninterrupted and careful treatment has been necessary to effect a cure. That the disease, without any treatment, will wear itself out, is true; but the eyes will be left, as in Case XIII., useless, from the contracted and adherent state of the pupil, and the amaurotic condition of the retina. If trifled with, the cure will be imperfect; synechia posterior, muscæ volitantes, and other irremediable sequelæ, remaining. If taken early, and treated vigorously, a complete cure may be prognosticated. Recovery is much more speedy and complete in young subjects; in adults it is more tedious.

Treatment.—1. *Depletion.*—The wan appearance of many of the patients, the smallness of their pulse, and the state of general debility in which they are, might tend to deter from a use of the lancet. I am satisfied, however, that we can rarely, with safety, dispense with this remedy. The blood, drawn from a vein, is only in a few cases buffy. Often it is difficult, from syncope coming on, to obtain more than a few ounces from the arm. When this is the case, leeches to the temples and round the eyes must be had recourse to.

If depletion is neglected, the recovery is very slow and uncertain; adhesions form, and cannot be got rid of, and vision continues

imperfect. We must not be regulated by the pain alone in taking away blood. Nothing relieves the pain so strikingly and effectually as venesection; but the state of the eye, independently of the pain, demands the taking away of blood. We should not even wait for the inflammatory stage of the disease, but relieve the congestion, on which the amaurotic symptoms depend, by the employment of depletion.

Some cases, especially in children, I have trusted to leeching; but in adults venesection is almost always necessary. I have not used arteriotomy, nor cupping, but have no doubt of their efficacy.

2. *Purgatives.*—The tongue being generally clean, and the bowels regular, there seems to be little demand for purgatives. At the same time, I have found them of considerable use in the course of the treatment. Sulphate of magnesia, castor-oil, and compound powder of jalap, are those I have most employed.

3. *Mercury.*—I am decidedly of opinion that the safest and the most effectual plan of cure embraces the use of calomel with opium, exactly as in the treatment of rheumatic or syphilitic iritis. This view of the matter is confirmed by the testimony of Mr. Hewson, who seems to have trusted to opening the temporal artery, and giving a dose of three grains of calomel with half a grain of opium each night. Dr. Jacob, also, found the use of mercury so certain and decisive in this affection of the eye, that he trusted to it almost exclusively. He gave two grains of calomel and a quarter of a grain of opium thrice a-day. The mouth should be made sore, but not too suddenly, lest we be obliged to omit the medicine prematurely.

4. *Belladonna.*—The dilatation of the pupil is an essential part of the treatment. This is to be effected by liberally smearing the eyelids and eyebrow with the moistened extract of belladonna, morning and evening; directing the patient to renew its activity from time to time, by re-moistening it with his finger dipped in water.

5. *Counter-irritation.*—Considerable benefit is derived from blisters to the temples and behind the ears, after due employment of depletion. They aid in removing the pain, lessening the inflammation, and recalling the power of vision.

6. *Cinchona.*—Mr. Wallace has keenly advocated the supremacy of cinchona as a cure for this affection of the eye. He thinks it has a specific influence over the disease; recommends it both when the patient is weak and seems to demand tonics, and when he is in full health; maintains the incurability of the disease by mercury; and is decidedly of opinion that there must exist some source of error in Mr. Hewson's account of the cases cured by this medicine. "When I commenced the use of bark in this disease," says Mr. Wallace, "I did not venture to employ it when the inflammatory symptoms were very severe, without preceding its administration by bleeding and purging. But latterly, whenever a case has presented itself, I have prescribed the bark alone, or simply with such medicines as were suited to the regulation of the bowels; and with the most decidedly good effects. Indeed, I have thought that the abstraction of blood has, on some occasions, considerably retarded the cure; yet cases may occur in which bleeding and purging will be necessary."

I have not employed cinchona bark in powder, but the trials I have made of sulphate of quina have not led me to adopt any very high opinion of its efficacy in this disease. Some of the milder cases have yielded, in a great measure, to the combination of calomel and quina, such as Case 9. Case 5 was much benefitted by quina. In Case 10 it acted very slowly and imperfectly. On the whole, I feel indisposed to trust to this remedy; and on this point I find my views corroborated by the experience of Dr. Jacob. "In two cases which I met with," says he, "after the inflammation had subsided, and in which vision was as much impaired as if no remedies had been adopted, bark, in powder, had been administered for ten days. I gave trial to the sulphate of quinine myself in four well-marked cases for eight days, but finding no relief, had recourse to mercury, which effected a cure in the usual time."

I shall not unnecessarily extend this report by commenting on the advantages to be derived from regulating the diet of the patient in this disease, and protecting him from cold; on the utility of warm fomentations, and anodyne frictions; nor on the problematical effects of such internal remedies as tartar emetic, colchicum, or turpentine, which I have not tried.

REMOVAL OF A DROPSICAL OVARIUM.

By George Southam,
Surgeon to the Salford and Pendleton Royal Dispensary, Manchester.

[Concluded from p. 204.]

(For the London Medical Gazette.)

With respect to some objections urged against the operation, as I believe that they are more imaginary than real, it may be well to offer a few remarks upon them.

It has been alleged, that although ovarian tumors ultimately prove fatal,

yet, by the interposition of remedial means, the patient's life may be prolonged for several years in tolerable comfort, whilst there is a great probability of death immediately following extirpation. It is no doubt true that individuals have lived many years in comparative ease with this disease, but I am inclined to think they bear a very small proportion to those who, from an early period, are in a constant state of suffering, which often causes death in a very few years, and not unfrequently in twelve or eighteen months.*

Dr. Bright has given the history of seven cases, which show that the disease if left to itself destroys life in about three years from the time it is first detected; an average by no means overstated, when we consider the premature deaths it occasions by impeding parturition. References to eighteen such cases, comprehending thirty-eight lives, are given by Dr. Merriman in the 10th volume of the Medico-Chirurg. Transactions, from which it appears nine women died; three recovered imperfectly, six perfectly. Of the children, sixteen were still born; four were alive; so that the lives actually preserved amounted to only twelve, the deaths to twenty-six.†

It is very doubtful whether most of the remedies proposed to retard the progress of the complaint have not rather accelerated its fatal termination; and from the following table, it will be seen that paracentesis, which is generally considered the most effectual palliative, not only affords a very temporary relief, but is by no means unattended with danger.

Table of twenty cases of Ovarian Disease in which Paracentesis was performed.

Those marked (1) occurred in the practice of Dr. Bright. The five marked (2) are recorded by Dr. Barlow, in the 4th volume of the Provincial Medical Transactions. The others were under my own care.

Initials of Patients.	Age.	Married.	Single.	Duration of life after first operation for Paracentesis.	Number of times tapped.	Cause of death.
——[1]	44	1	—	24 hours	1	Inflammation.
A. B.[1]	—	—	—	48 ,,	1	——
— H.[1]	—	—	—	Several days, 10 ?	1	——
E. S.[2]	36	1		Few days, 7 ?	1	——
M. H.[2]	40	—	—	1 month	1	Ulceration of sac, and escape of contents into the abdomen.
——[1]	45?	—	—	1 ,,	1	Exhaustion from extensive schirrous disease.
— B.[1]	—	—	—	1 ,,	1	Exhaustion.
——[1]		1		2 ,,	2	
E. W.	26	1		4 ,,	3	Exhaustion.
S. P.[2]	35	1		7 ,,	1	
M. M.[1]	53	1		7 ,,	5	Inflammation.
C. E.[2]	40			8 ,,	6	Exhaustion.
— O.	54	1		8 ,,	1	——
S. B.	20		1	9 ,,	4	Inflammation.
E. S.[2]	22		1	15 ,,	6	
A. M.[1]	34	1		18 ,,	2	Inflammation.
— T.	33	1		4 years	7	Exhaustion from pressure of tumor.
E. W.[1]	27			4 years 9 months	14	Inflammation after tapping
E. B.	32		1	7 years	4	—— ——
M. N.[1]	35	1		8½ years	11	—— ——

From Dr. Ashwell's summary of Obstetric Cases admitted into Guy's Hospital, it appears that of eleven cases of hydrops ovarii, seven were tapped; three of which were unsuccessful. He does not state how often they were individually tapped. Reports, 1837-8.

* Vide Bright's Records of Ovarian Tumors, Guy's Hospital Reports, 1838. Dr. Seymour relates the particulars of a case where the disease appears to have run its course in six months.—Illustrations of Diseases of the Ovaria, 1830, p. 67, 68.

† Synopsis of Difficult Parturition, 4th Edition, p. 62.

Thus, fourteen died within nine months after the first operation, four of whom survived it only a few days. Of the remaining six, two died in eighteen months, and four lived for periods varying from four to nearly nine years.

It further appears that paracentesis does not prolong life on an average for more than eighteen months and nineteen days; and that one in five dies from the effects of the first operation. Another fact to be gathered from the table is, that the peritoneum being more prone to inflammatory action in some persons than in others, repeated tappings, instead of proving barriers to extirpation, show that (other circumstances being favourable) there is much less risk of inflammation following the operation.

The disease, it is said, frequently assumes a malignant character, consequently no lasting benefit will result from the operation. Indeed, Dr. Bright states, "it is truly a malignant disease; and though it usually assumes one, and that a milder modification, in preference to the rest, is not unfrequently found degenerating into the worst and most destructive forms of the fungous and cerebriform cancer; and it undergoes those changes by such insensible degrees, that it is impossible to draw the line, and deny a malignant character to one, while we grant it to the others."

Some of his cases certainly prove that the ovary may be affected with malignant disease, in common with the other organs of the body; but if the term malignant is to be limited to cancer, medullary sarcoma, and fungus hæmatodes, they afford no more proof that the true dropsical ovarium ever partakes of any of those affections, than that the presence of tubercles in the ovaries shows the disease to be of a scrofulous nature, as some have supposed. The mamma is the most frequent seat of schirrus; yet encysted tumors may be developed in its structure, and remain for several years, or even for life, without degenerating into any of the forms of that disease.

The analogy between dropsical cysts and the local origin of carcinoma, which Dr. Hodgkin* first discovered to consist in the presence of a serous membrane having a cystiform arrangement, affords no proof of their identity, since the recent researches of Schwann, Müller, and others, show that not only are all abnormal growths formed from cysts or cells, but that the different structures of the body have a similar origin. We cannot, therefore, adopt what appears to be the revival of an old theory, which referred the formation of schirrus to the previous existence of vesicles having the nature of hydatids*, but must look for its element in a perversion of the nutritive and secreting functions of the body.

The only foundation for attributing malignancy to the encysted ovarian disease, appears to consist in the presence of the solid masses sometimes forming part of the tumor, or growing from the internal surface of the cysts, which on a superficial inspection not unfrequently resemble the semitransparent and fibrous structure of schirrus, or the cerebriform and fungoid appearance of medullary sarcoma; but any further they do not appear to assimilate.

The peculiar appearance of the countenance, the sharp lancinating pains, and other general conditions of the patient which denote the existence of schirrus, seldom occur in persons suffering from the true ovarian disease. The ulcerated surfaces of the tumor present no hard, ragged, and everted edges; the indications of hæmorrhage having previously existed are wanting. The fluid part bears a large proportion to the rest of the structure, and instead of assuming the character of an offensive ichorous discharge, when of a purulent nature, it has the appearance of ordinary pus. Cysts have been frequently found after death connected with the ovary, which had not been detected during life, and there are several authenticated cases of extremely large tumors, with equal and smooth surfaces, having existed for many years without affecting the healthy functions of the body, which generally suffer more or less where there is any tendency to malignant action.

The disorganization, therefore, occasionally met with in ovarian tumors must be referred to causes having a local origin, probably to inflammatory action, produced from pressure and other irritating circumstances. It is well known that encysted tumors, when seized with inflammation, cannot,

* Med. Chir. Transactions, Vol. 15.

* Barron on Tuberculous Diseases.

from their low degree of vitality, long resist its influence.

As in diseased states of the system inflammation frequently takes on some specific action, it is not unlikely that, when it attacks morbid growths, effects may be produced, which, though not exactly presenting the appearances of healthy inflammatory action, are analogous to its suppurative and ulcerative stages, or to that peculiar alteration of the tissues called *ramollissement*.

Having carefully examined several specimens of dropsical ovaria, I am inclined to agree with Drs. Hunter and Burns*, that they never present a truly schirrous character; on the contrary, that they generally consist of simple cysts, or partake of what is called cystic sarcoma†, for the development of which the peculiar structure of the ovary appears highly favourable.

The far greater size which the disease attains, compared with similar affections in other parts of the body, depends on a variety of circumstances; the most obvious of which are, the position of the ovaries in the abdomen being free from all pressure or restraint likely to limit their development; the abundant supply of blood which the parts periodically receive, and the natural disposition of the generative organs to obey a stimulus which requires an increased supply of nutritive matter, and gives rise to a proportionally rapid growth‡.

I lately examined the body of a female who had died from what was thought to be a dropsical ovarium. The tumor, however, originated in the fallopian tube, and was formed of two cysts: one contained upwards of three gallons of fluid, the other about two. On the internal surface of each cyst, in the most depending situations, there were several patches of solid matter, apparently of recent formation; none of them were larger than a crown-piece, and in a few instances they had coalesced. The ovaries and other organs of the body were perfectly sound. This case resembles several described by Dr. Baillie and others as hydrops tubalis. They evidently consist of adventitious cysts, and do not differ from similar ones sometimes found in the ovaries, which have been erroneously supposed to be merely enlarged Graafian vesicles*.

Since the disease rarely leads to a speedily fatal termination, we have seldom opportunities of examining its earliest conditions; but from the history of protracted cases, it would appear that one or two cysts frequently exist for several years before the solid matter is developed, and that the progress of the complaint is often influenced by the quantity and rapidity with which the latter has been secreted.

The proportion which the solid mass bears to the whole tumor forms an important feature in recommending extirpation. *Solidity alone* must be regarded with caution in determining upon the propriety of the operation, as it generally indicates malignancy, or uterine disease. The presence of fluid being one of the essentials of the true ovarian disease, extirpation ought never to be attempted where it is not detected.

In arguing for the non-malignancy of the ovarian disease, I do not deny that encysted tumors may occasionally occur in connection with some of the varieties of scirrhus. They are sometimes combined in the testicle, but more frequently they occur in parts at a distance from each other. Not many days since, I saw a man suffering from cancer of the lip, who had a tumor near the nose presenting all the characters of cystic sarcoma, which had existed many years before the other disease appeared. I have notes of a similar case where the cancer was removed, and though the patient lived upwards of three years, the sarcomatous tumor never assumed a malignant appearance.

The simultaneous occurrence of these diseases, then, cannot be regarded as necessary conditions of each other, but merely as indications in the system of a tendency to develop morbid growths.

With respect to the malignant affections of the ovaries, it has been customary to class many diseases with them which have not the least analogy.

"It is impossible to conceive," says Dr. Seymour, "any signification more vague than the sense in which the term schirrus is used, when applied to diseases of the ovarium. If taken in the comprehensive meaning in which many au-

* System of Midwifery, p. 136.

† The firm or sarcomatous part of a diseased ovary was regarded by Mr. Abernethy as an excellent specimen of the structure of this disease.

‡ Hodgkin, Med. Chir. Transactions, Vol. 15.

* Cruveilhier, Anatomie Pathologique, cinq livraison.

thors have employed it, it represents equally the degeneration of the ovarium by age, and the enlargement of the ovarium by the deposition of any solid structure; and is often applied to that form of ovarian disease in which a portion of the tumor is solid, and a portion made up of cysts filled with secretions of various consistence."

Malignant disease of the ovary may generally be easily recognised by the mammæ or other organs being more or less implicated, and by the general cachectic condition of the constitution. The tumor is developed with much greater rapidity than the ordinary ovarian disease, presents an uneven surface, and consists principally of solid matter.

Much has been said respecting the proneness of both ovaries to be diseased. I have carefully examined the records of 29 cases of true dropsical ovaria, and found that there were but two in which the opposite ovary presented a *decidedly* abnormal character*. Where, however, the disease was malignant, both were affected in three cases out of four. As an objection, then, to extirpation, the complication is scarcely worthy of notice, seldom occurring where the operation would be considered justifiable.

I may here advert to an affection occasionally attacking the testicle, identical in structure to encysted disease of the ovary, and usually, but erroneously, designated hydatid testicle. This disease, like that of the ovary, is unaccompanied by any constitutional taint, being entirely local; and experience proves that it has several times been removed without the patients suffering any relapse.

Though several successful cases of extirpation have recently been published, many surgeons still regard the operation as too dangerous to be admitted into the routine of practice. To exhibit the amount of danger, Dr. Forbes has favoured us with the statistics of the operation, which are here chiefly noticed on account of their inaccuracy. He gives two tables, the first of which he says "displays those cases in which the diseased ovarium was actually extirpated," from which it appears that of 19 cases, 6 were fatal. This statement is given in the October number of his Review, and might be expected to contain the actual state of experience to within a few weeks of its publication. But what is the result? Mr. Walne's second successful case is omitted, although it was announced in the MEDICAL GAZETTE nearly three months previous to the publication of Dr. Forbes's tables; whilst among the fatal cases he has included one of uterine tubercle recorded by Dr. Clay*. With these corrections, the statistics previous to October last would be five fatal cases out of 19, or nearly 1 in 4 of those actually extirpated; an average which suffers no diminution from the four cases since recorded, one only of which (Mr. A. Key's) was fatal. Those, then, who test the propriety of an operation by statistics, must sanction this one. Few surgeons hesitate to perform amputation of the thigh, though Mr. Phillips, who has paid great attention to this branch of surgical practice, states that nearly two out of five die†. In the Parisian hospitals, the operation for hernia proves fatal in four cases out of seven‡, and in London the result is scarcely more favourable§. If a correct system of reporting was honestly carried out in the London and provincial hospitals, I believe lithotomy would not be found so successful as is generally stated—not to mention that it sometimes requires repetition‖.

With regard to the statistics of the operation, much reliance cannot be placed on them, until the cases are more numerous, and surgeons better agreed as to the nature of those warranting extirpation. Mr. Walne appears to select those only where the symptoms indicate few or no adhesions. Dr. Clay says, that "neither extent of adhesions, size of tumor, ascitic deposit, worn-down

* Removal of one ovary does not prevent the female becoming pregnant, for Dr. Chrysmar states that his patient, who was alive eight years after the operation, had in the interval given birth to a living child.

* In describing the disease, Dr. Clay remarks that it "presented very different appearances to encysted ovarian tumors; it was of a bright pink colour, hard as a piece of boiled liver, and composed of numerous small lobes with acute edges, similar to the lobes of the liver." * * * "There was but a small portion of the neck of the uterus and the os uteri that was not amalgamated with the substance of the tumor."—*Cases of Peritoneal Section*, p. 17.

† MEDICAL GAZETTE, Vol. i. 1840-1.

‡ Gaz. Méd. de Paris, and Edin. Med. Journ. Oct. 1843.

§ Of 18 cases operated on in Guy's Hospital, 9 were fatatal.—See Mr. Poland's Report.

‖ Mr. B. Cooper has operated three times on the same subject. Sir A. Cooper twice, if not a third time. Mr. Martineau and Mr. Rigby have both operated twice.—*Guy's Hospital Reports*, 1843.

constitution, nor peritoneal inflammation, should prevent extirpation being performed." Having witnessed the operations on which this statement is founded, I can bear testimony to the amount of adhesions that may be overcome without occasioning any drawback to the patient's recovery. It must, however, be recollected, that the individuals were advanced in life, when inflammation is less likely to ensue, and that the adhesions, though extensive, were limited to the abdominal parietes, or to a few band-like attachments to the viscera. From the particulars of the fatal cases recorded by Dr. Chrysmar and Mr. Lizars, it appears doubtful whether the operation ought to be proceeded with when the diseased mass is found adhering to the viscera to any extent. I say found, because, before an exploratory incision has been made, we possess no means, except from the presence of ascitic fluid, which does not always exist, and mobility of the tumor, of ascertaining whether the connections of the disease will admit of its removal. Dr. Bright states, that when parietal adhesions are present, a slight crepitus, or the crackling feel of new leather, may be distinguished by making the parietes move gently over the tumor. This, I believe, depends on a small quantity of fluid between the adhesions, for when ascitic fluid has been absent I have not been able to detect it, though very extensive adhesions have been afterwards found.

The operation is perfectly justifiable when the patient's sufferings are such as to make life a burden to her; when the symptoms of structural lesion of any important organs are absent; and when the constitution is suffering merely from functional derangement consequent upon pressure of the tumor on the neighbouring parts. On the contrary, it ought not to be attempted when the well-known characteristics of malignant action are present; when the tumor is solid, uneven, and has been of rapid growth; when the glands in the vicinity are enlarged, and hard knots can be felt in different parts of the abdomen, or when there is distinct evidence of other organs being similarly implicated. Still less should it be undertaken until the surgeon, by varied and repeated examinations, is convinced of the existence of the disease. Nor must the rules which direct us as to the propriety of operating in other diseases, respecting the condition of the sexual organs, and the fitness of the patient's constitution to undergo so severe an operation, be overlooked. Considering that extirpation of the ovary is still in its infancy, there is every probability that as our experience increases it will, under proper restrictions, prove as successful as lithotomy. The surgeon will be thus enabled to restore to health individuals who must otherwise have dragged on a miserable existence for a considerable period. A glorious monument will be raised to the healing art through the improvement of surgical knowledge; and that boldness of surgical energy, which the timid were but too ready prematurely to condemn, will be ultimately sanctioned by an enlightened and applauding profession.

CONTRIBUTIONS TO ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.

Lecturer on Anatomy and Physiology, and Corresponding Member of the French Academy of Medicine.

[Continued from p. 212.]

Hermaphroditism; a Memoir read to the Royal Society of Edinburgh in 1827 *and* 1828.

During the winter sessions of the years mentioned in the title, I composed very hastily the memoir which follows these remarks, and which was read to the Royal Society at various times: the view adopted in the memoir I admitted then, and still admit, to be mainly theoretical; or rather, I may say, "in a sense theoretical," for essentially the theory is based on induction from a wide range of facts and observation, and on analogies of a striking and forcible kind. The "theory," however, has been objected to, and reasons have been assigned for its inadequacy to explain the phenomena it was presumed to embrace, by a gentleman of great learning, patience, and candour, Dr. Simson, author of an excellent article on hermaphroditism in the Encyclopædia of Anatomy and Physiology.

My object in the few remarks I am about to prefix to the memoir is briefly to reply to Dr. Simson's objections in the same spirit as his were brought forward; and as neither of us are the

claimants of any peculiar discoveries in the matter of hermaphroditism, but simply aim at the thorough investigation of those theories which have been proposed in explanation of the phenomena, (the general insufficiency of which I, with Dr. Simson, willingly concede,) there ought not to occur any asperity in the remarks, concealment of discordant facts, nor unwillingness on my part to admit the theory to be as worthless as all its predecessors and successors, provided it really prove so.

A paper read by M. Duneril to the French Academy first attracted my attention, whilst yet a student, to the doctrines of transcendental or philosophic anatomy: from this paper, or in some other way, I first learned that "the doctrine" that the "cranial bones were only vertebræ, cranial vertebræ," had been propounded by a learned physician, J. J. Frank; that he seemed to have borrowed from, or to have been anticipated by, Goethe; and Goethe by Newton. But it was not until the winter 1821, that after many, very many, conversations with the illustrious savans of the French capital—the elder Geoffroy, M. de Blainville (whose lectures I carefully attended), Baron Cuvier, and once with M. Oken, and Serres—that I learned the full extent to which some at least of these distinguished men were disposed to carry the transcendental theories of the German school. The elder Geoffroy in particular, himself not an anatomist, slowly drew after him, notwithstanding, the more practical men, the best anatomists of the capital; who finding themselves *unable* to stem the torrent, if I may so say, of idealism with which M. Geoffroy had possessed all minds, reluctantly and with much hesitation gave way to that doctine which they could neither refute nor arrest. But the theories proposed to explain the development of the respiratory organs (these being the organs which chiefly engaged his attention at that moment), by the elder Geoffroy, appeared to me even then (1821) unsatisfactory, and even contradictory; and on my return to Britain, I ventured to propose in the course of my lectures on comparative anatomy, delivered during the summer sessions of 1825, 1826, and 1827, the theory of "type," not as contradictory of that of unity of organization (which it in no shape is), but in opposition to that doctrine which maintained that the respiratory organs are at *first* in the embryo not only of one kind, but even "neuter as regards function;" that a pulmonary apparatus might be and was converted into a branchial set of organs; that organs might be converted into each other; that the hyoid bones were ribs, &c. To all these doctrines I made this forcible objection, namely, "that there exist animals with both lungs and gills; that the trachea and bronchial tubes, if found at all in animals whose breathing was aquatic, could only exist in them in a rudimentary condition, and could not be converted into other active organs of breathing; that the air-bladder in fishes was simply a rudimentary lung, and that the hyoid bones in man were merely rudimentary branchial arches; finally, I proposed the theory that in the embryo of all the vertebrata the type of the respiratory organs was double—at once aerial and aquatic, pulmonary and branchial. I have frequently been told that the same objection had been repeatedly made in Paris to M. Geoffroy himself; my personal esteem for my distinguished friend always prevented me speaking on the matter to him, at least with any view towards controverting his theory. But I well remember that a gentleman now ranking high as a philosopher, and who did me the honour to attend some of my lectures on comparative anatomy, asked me why I did not attempt to prove the theory by an appeal to the structure of the embryo of many animals, in some one or other of which I might happily stumble on the *direct proof* of the theory: and until this were shewn he felt disposed to view the whole doctrine as merely a theory, or hypothesis; an assumption, in fact, adopted to explain readily certain phenomena otherwise inexplicable. The same objection, if objection it can be called, had of course occurred to myself; it could not well be otherwise; an objection, similar in all respects, has been made by Dr. Simson to my theory of hermaphroditism. The objection, however, as it turned out, proved to be more apparent than real: that animals now live in whom both sets or organs *co-exist* was beyond all doubt, and therefore in them all the type is double; that in the adult animal, even in man himself, there are obvious rudimentary organs characteristic of the branchial respiration; and that therefore we must either

admit the type to be *double* in all animals, or that there were *two* distinct types held in view, viz. one pulmonary and one branchial; or that the original type was *aquatic*, and the pulmonary system became superadded as the human embryo ceased to be a fish, leaving him, however, with the rudimentary traces of his ichthyological existence: *une arrêt de developement* explained why the ichthyological organs had ceased to grow. But then, how comes it that the fish should have a rudimentary lung? Admitting that mammals are found during the embryonic condition to pass through the inferior forms of existence, the fish, the reptile, the bird, why should the embryonic fish be forced to pass through, but in an opposite direction, the higher forms of animal existence, which the rudiments of a *pulmonary* apparatus clearly indicate? The "arrêt de development" doctrine will scarcely apply in either case. To cut short these difficulties and contradictions, I simply asserted that the original type in all the vertebrata was *double*, *i. e.* pulmonary and branchial, there being no other theory which seemed explanatory of all the appearances.

No one will readily believe that I was insensible to the importance of *proving* by *intuitive* inspection that the embryo of the vertebrata has both sets of organs, but the cares and anxieties necessarily attendant on the teaching a large and increasing class fully at the moment engaged my whole attention; specimens (human embryo), were difficult to be obtained, and their possessors unwilling to allow of their minute dissection: thus it was reserved for Rathke to discover the *branchial arches* in the embryo of the vertebrata having in the adult an aerial or pulmonary respiration; one of the greatest discoveries of modern times: thus proving, by intuitive inspection, the type of the respiratory organs to be, in most vertebrata at least, double, not single; and not neutral or common, but distinct from the earliest moment when the organs can be clearly made out.

The objections made by me to the doctrine of the transmutation of organs into each other were not limited to the respiratory organs: no one who had read Mr. Hunter's work on the Animal Œconomy could put any faith in the continental transcendental doctrines or theory of the generative organs. When I was told that the generative organs in the embryo were at first all female or neuter, my answer was simply this—many animals are strictly hermaphrodite, that is, there are animals in whom *both sets of organs* co-exist. There must, then, be *two* types of these organs in nature, which is contrary to the simplicity of all her works, and contrary to the doctrine of the unity of organization. 2d. Most plants are hermaphrodite. 3d. Hermaphroditism, more or less complete, does occasionally appear, even in the highest of mammals. 4th. Rudimentary male organs exist in woman, and rudimentary female organs exist in man; therefore the type of the organs must be double in the embryo. Notwithstanding these *facts*, which Dr. Simson seems not to consider as such, the theory has been objected to on the same grounds as that regarding the respiratory organs, viz. that as yet the duplicity of the generative organs has not been *shewn* in the embryo. For my own part, I do not see that this is at all necessary for the confirmation of the theory proposed; but this, together with all the other objections made to the theory, I shall take the liberty of examining more fully at the conclusion of the memoir, which I have already stated was read to the Royal Society here in 1827 and 1828.

REMARKS ON THE RESPECTIVE VALUE OF THE DIFFERENT TESTS PROPOSED FOR THE DETECTION OF A DIABETIC STATE OF THE URINE.

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(*For the London Medical Gazette.*)

In the treatment of a disease so intractable and fatal as diabetes too generally proves, it becomes of essential importance to detect the first deviation from health. The earliest evidence of this, in the disease in question, is, as is well known, to be sought for in an examination of the urine, as a saccharine condition of that secretion is at least the most constant, if not the necessary, accompaniment of

almost every phase of diabetes mellitus. It must not be supposed, however, that the existence of traces of sugar in the urine is indicative of the necessary presence of a confirmed diabetes; for it is beyond all doubt, that small quantities of this principle may occasionally exist as the result of a depraved state of the primary or secondary assimilative processes. Still, as far as experience has extended, it has shown that such a condition of the urine must be regarded with great anxiety as a most suspicious symptom; as one which, at least, points out the existence of a most deranged condition of the functions of the stomach, and one which may, in all probability, if its cause be unchecked, be the forerunner of one of the most intractable diseases falling under the province of the physician.

It is true that in advanced diabetes, where the disease has become confirmed, and the system has suffered severely from its depressing influence, the increased quantity of urine, coupled with its high specific gravity, and its general physical characters, will at once lead to the detection of the disease. Every one who has attended much to the pathology of the urine must have, however, met with cases of tolerably well-marked diabetes, *quoad* the general symptoms, in which, nevertheless, neither the quantity nor specific gravity of the urine would have, by themselves, been sufficient to lead to a suspicion of the true nature of the disease. A remarkable illustration of this fact occurred in the person of a young woman who, in the past summer, was a patient in Guy's Hospital (in Dorcas ward), under the care of Dr. Barlow. She had previously been a patient of my own, and then presented well-marked constitutional symptoms of diabetes, with the exception of the absence of the excessive thirst and diuresis. This girl was 28 years of age, but had never menstruated. The peculiar state of the tongue, which resembled a piece of raw flesh, and the harsh skin, induced me to examine the urine. The density of this fluid was but 1·022—scarcely above the average, and she passed but from three to four pints in twenty-four hours. I however found that it contained a large proportion of sugar. In a few weeks the quantity increased to eight or ten pints in twenty-four hours, and she ultimately fell a victim to confirmed diabetes. There is at this moment a man, about 60 years of age, in the hospital (Naaman ward), labouring under diabetes, who, when he first came under my care among the out-patients, attracted my attention by his melancholic expression and harsh skin. On inquiry, I found that he passed but from three to four pints of urine in twenty-four hours, and the specific gravity did not exceed 1·024. It was, however, loaded with sugar. In this case the diuresis, or excessive discharge of urine and its high density, did not appear until some weeks after I had detected the presence of the disease. I have had, for nearly four years, a patient occasionally under my care (a green-grocer residing in Goswell Street), with diabetes, who, when first I saw him, had neither diuresis nor increased density of the urine; and these symptoms did not appear until some months after, although the urine was strongly saccharine the whole time. I need not multiply references to cases of this kind, as no doubt can exist as to the presence of diabetes, for at least some weeks, in cases where the indications afforded by the general symptoms appear to be negatived by what, on a very superficial view, may be taken for a healthy condition of the urinary secretion. Of course the question of the probable presence of sugar can at any time be solved by chemical analysis, but this involves a considerable expenditure of time, as well as an amount of tact in investigations of this kind not always at the command of every practitioner; and hence the importance of possessing some test of the presence of sugar easy in its application and satisfactory in its indications.

1. *Hünefeld's test**. — Place four ounces of the suspected urine in a glass exposed to the sun's rays, and add about six drops of a tolerably strong solution of chromic acid. In a few minutes, the mixture, previously orange-red, becomes brownish, and soon after assumes a bistre-brown colour, if sugar be present. These changes take place much more quickly if the mixture of urine and chromic acid be gently warmed before exposure to light.

This test depends, for its action,

* Journal für Practische Chemie, vii. 42. Copied into Berzelius's Jahresberichte für Physischen Wissenchaften, 1837, p. 386.

upon the deoxydizing power of the sugar, by which the chromic acid is reduced to oxyde of chromium; for, after warming the mixture, the addition of a few drops of liquor potassæ produces a copious deposit of the green oxyde. As pure chromic acid is prepared with great difficulty, I endeavoured to find some preparation which might replace it, and found that, by making bichromate of potass into a paste with sulphuric acid, and boiling the magma with not quite enough water to dissolve it, a solution was obtained which, when decanted from the crystals formed during cooling, contained enough free chromic acid, or rather of a combination of this with sulphuric acid, to exhibit all the changes with saccharine urine above described. In using this solution enough should be added to the suspected urine to give it a full orange colour, without which the subsequent changes will not be perceptible.

There is an important objection to this test, which renders all its indications liable to serious fallacy, depending upon the fact that all urine containing a normal proportion of colouring matter deoxydises chromic acid; and consequently urine, whether saccharine or not, will partially convert this acid into oxyde. This change certainly does not occur so readily in non-saccharine urine as in a diabetic state of that fluid, but still is sufficiently marked to prevent Hünefeld's test being regarded in any other light than a fallacious one.

2. *Runge's test**.—Allow a thin layer of the suspected urine to evaporate on a white surface, as the bottom of a white plate, and, whilst warm, drop upon the surface a few drops of sulphuric acid previously diluted with six parts of water. With healthy urine, the part touched with the acid becomes merely of a pale orange colour, from the action of the latter upon the colouring matter of the urine; whilst, if sugar be present, the spot becomes deep-brown, and soon black, from the decomposition of sugar by the acid, and consequent evolution of carbon. This test is stated to be so delicate, that one part of sugar dissolved in one thousand of urine can be readily detected; and even when mixed with two thousand parts, the indications are tolerably distinct.

Regarding the sources of fallacy to which this test is liable, I may mention the presence of albumen, which causes the acid to assume a tint nearly resembling that produced by sugar. There is also a peculiarity in its action which I have more than once had occasion to observe, namely, that if the urine is evaporated so as to be capable of being drawn into threads, it scarcely produces any change of colour, on the addition of the acid, until heat is applied. It is, however, a much more trustworthy test than the last, although certainly far inferior to the following.

3. *Trommer's test.*—This, which is the latest test suggested for the detection of sugar, was proposed by Trommer, of Berlin, and received the sanction of Professor Mitscherlich. An account of it is published in Dr. Simon's *Physiologische und Pathologische Anthropochemie**.

Add to the suspected urine contained in a large test tube, a few drops of a solution of sulphate of copper; a very inconsiderable troubling generally results, probably from the deposition of a little phosphate of copper. Sufficient liquor potassæ should then be added to render the whole strongly alkaline; a greyish-green precipitate of hydrated oxide of copper falls, which if sugar be present wholly or partly redissolves in an excess of the solution of potassa, forming a blue liquid, not very unlike the blue ammoniuret of copper†. On gently heating the mixture nearly to ebullition, the copper falls in the state of sub-oxide, forming a red and copious precipitate. If sugar is not present, the copper is deposited in the form of black oxide.

This test is founded on a fact long known, but not previously applied to the detection of sugar, of the power possessed by some organic matters of reducing oxide of copper as well as some other oxides to a lower state of oxidation. It certainly is the most delicate of all the chemical tests hitherto proposed for the detection of sugar in the urine, and will readily detect it in diabetic urine, even when very largely diluted.

* oggendorff, Annalen, Band 33, S. 431.

* Berlin, 1842. Band 2, Seite 389. Attention has been directed to this test by Dr. Jones, in the last volume of the Medico-Chirurgical Transactions.

† Rose's Analytical Chemistry, by Griffin, p. 119.

It is important in using this test that no more of the solution of sulphate of copper be used than is sufficient to afford a decided precipitate on the addition of the liquor potassæ. If this precaution be not attended to, a part only of the black oxide will be reduced to red sub-oxide, unless a very large quantity of sugar is present, and thus the indications afforded by this test be rendered indistinct.

In his remarks on this test, Simon observes, that the presence of the urea and ammoniacal constituents of the urine may in some cases interfere materially with its indications. To avoid this, he directs the suspected urine to be evaporated to a syrup, and digested in pure alcohol. The alcoholic solution being decanted, is agitated with dry carbonate of potass, and on being allowed to repose it separates into two layers, the upper consisting of the alcoholic and the lower of the alkaline fluid. A small quantity of a solution of sulphate of copper is then added, and the whole being warmed a yellow or yellowish-brown precipitate occurs in the lower layer, if sugar is present. I very much doubt whether this refinement of the test is ever necessary in practice, and it certainly has the objection of requiring a long time and a tedious manipulation for its completion, which is quite opposed to the character of a "*test.*" As directed by Trommer, his test can be applied to urine in a few minutes, and its indications are most satisfactory.

4. *Test of fermentation.*—The development of the vinous fermentation on the addition of a little ferment or yeast to a fluid, has long been applied as a test for the detection of sugar. It was successfully employed by Professor Leopold Gmelin of Heidelberg* for the detection of sugar in the animal fluids after the injestion of amylaceous food. Dr. Christison has, I believe, the merit of particularly suggesting the application of fermentation for the discovery of a diabetic state of the urine.

When a little yeast is added to healthy urine, and exposed to a temperature of about 80°, no other change occurs for some time except the development of a portion of carbonic acid mechanically entangled in the yeast. When sugar is present in the urine thus treated it soon becomes troubled, a tolerably free disengagement of bubbles of carbonic acid takes place, and a frothy scum forms on the surface of the fluid, which evolves a vinous odour. These changes take place with great rapidity, even when the quantity of sugar present is very small. If the evolved carbonic acid is collected, the quantity of sugar in the urine may be determined by measuring it, as a cubic inch of the gas very nearly corresponds to a grain of sugar.

In certainly the great majority of specimens of diabetic urine it is not necessary to add yeast to excite fermentation, providing a sufficient temperature be employed. This, indeed, has been stated to be the exception, but from my own experience, I can assert that I have never yet left a glassful of diabetic urine upon a chimney-piece, when there is a fire in the grate, without having ample evidence of the development of fermentation within 24 hours. This test is certainly one of the best that can be employed, and is not subject to any obvious source of fallacy. It is, however, not so useful as Trommer's, as it cannot be appealed to at the moment, and requires time for the development of its indications.

5. *Test afforded by the growth of torula.*—It is a remarkable fact, that if the smallest proportion of sugar exists in urine exposed for a few hours to a temperature above 70°, and a drop of the fluid (taken from the surface) be examined under the microscope, numerous very minute ovoid particles will be discovered. In the course of a few hours more these become enlarged, and appear as distinct oval or egg-shaped vesicles, which soon become developed into a confervoid or fungoid vegetation, identical with that which appears in ordinary saccharine fluids when undergoing the vinous fermentation. In hot weather I have detected the oval spores of the torula diabetis, as the organic production is termed, in diabetic urine within a few hours after its being passed; and for the last two years I have constantly relied on their appearance as the indication of the presence of sugar in urine. I can scarcely conceive an error arising from mistaking other organic particles for these spores, as the latter are always oval or ovoid, whilst all other of the organic particles developed in the urine

* Recherches Experimentales sur la Digestion. Paris, 1826. Part i. p. 202.

are circular. As soon as the torula has appeared, vinous fermentation rapidly proceeds, and hence any possible inaccuracy arising from mistaking other particles for the spores becomes corrected.

The advantages of this test are the facility with which its indications are observed by the microscope with an object-glass of $\frac{1}{7}$th or $\frac{1}{8}$th inch focus, and the certainty of any possible fallacy being corrected by the subsequent development of fermentation. It is, however, less convenient than Trommer's, in consequence of the time required before its indications can be observed.

I have excluded from this list of tests that of Bouchardat*, depending upon the circular polarising power of the urine, as it is difficult in application, requires an expensive apparatus seldom at hand, and moreover has its indications seriously interfered with by the colour and imperfect transparency of the urine.

I have more than once had my attention directed to the probable presence of diabetes by observing on the patient's trowsers white spots, arising from drops of urine having dried upon them. These spots consist of minute patches of dry sugar, and are readily removed by brushing. This, although it cannot be regarded as an actual indication of the presence of sugar, is, nevertheless, useful as a leading question in investigating the patient's history.

In conclusion, I would remark that, excluding Prof. Hünefeld's chromic test, as too liable to fallacy to be of any practical value, the other tests, arranged according to the accuracy and convenience of their indications may be thus placed—

1. Trommer's copper test.
2. Growth of torula.
3. Development of fermentation.
4. Runge's sulphuric test.

The profession must remain greatly indebted to Trommer for putting it in possession of a test for the presence of sugar in urine, so easy in its application, and so distinct in its indications, with the additional value of requiring but a few minutes for its employment.

Myddleton Square, Nov. 20, 1843.

* Described in my Lecture on Urinary Deposits, vide Med. Gaz. 1843, p. 683.

CASES OF PULMONARY EMPHYSEMA AS A CAUSE OF DEATH.

To the Editor of the Medical Gazette.

Sir,

It was not originally my intention to have published the following cases, and they therefore are by no means so complete as I could wish, but lately reading some observations on pulmonary emphysema as a cause of death, and as one of them bears out a statement made, I have transmitted them to you, but without any remarks, lest I should intrude too much on your valuable space.—I am, sir,

Your obedient servant,

John H. Tripe.

Commercial Road, Nov. 20, 1843.

Case I.—J. Pearson, æt. 29, wine-cooper, rather addicted to drink, short, but stoutly made, was first seen by me three years since, when he was of an earthy hue, and complained of cough and dyspnœa, which had troubled him more or less for some years, both being increased in winter, but especially the dyspnœa. About two years afterwards I again saw him: the dyspnœa had become constant, increased on exertion, or after meals; palpitation, cough, usually with but little expectoration; no wasting or œdema; there were also constant headache, and frequent giddiness; the countenance of a leaden tint; the lips large and purplish; lividity of the hands and nails; and fulness of the external jugulars, which did not disappear on pressing the upper part of the vein. There were local signs of emphysema, bronchitis, and dilatation, with hypertrophy of the right side of the heart. Roundness of the anterior part of the thorax; sound on percussion very loud, except at the lower part of the sternum, where the dulness was more marked than usual. Respiratory murmur scarcely audible; expiration longer than inspiration in the proportion of about three out of five; but the ribs and diaphragm were longer in performing inspiration than expiration; the rhonchi sibilans, gravid and mucous; the first sound of ihe heart varied on each side, on the left being normal, and on the right shorter, sharper, and clearer than natural; no bruit. After a short time he returned

to his employment, and continued so with but little interruption until the middle of last month, when he called on me, at which time the dyspnœa was much aggravated, the lividity increased, the pulse quick, small, and oppressed. On the 28th, he was discovered by his friends insensible, as they called it, in bed. On my visit, I found him lying on his back, capable of being slightly roused; pupils contracted, but sensible; the pulse imperceptible at the wrist; the heart's action feeble, fluttering, and oppressed; respiration very difficult, but not stertorous. The face leaden; lips blue and very large; hand dusky, and nails livid. A dose of æther was administered. In an hour, the pulse having risen, he was bled, the pulse rising as the blood flowed; sensibility returned, and he spoke to those around, the countenance, lips, hands, and nails, becoming less livid. From this time he gradually relapsed, all the symptoms returning, and he died in 23 hours after the bleeding; stimulants having been administered by moistening his lips, for he resisted any attempt to introduce them into his mouth, even up to ten minutes before his death. A post-mortem examination refused in the most positive terms.

Case II.—Miss Pearson (sister to the above), ætat. 21, of a leuco-phlegmatic habit, applied to me on the 3d of May last, and gave the following history. She had enjoyed good health up to a fortnight previously, never having had any acute disease, except about a year ago, when she was confined to her bed with fever, and acute pain of the left side. The present attack commenced with cough, dyspnœa, and feverishness, with expectoration of a yellowish sputa. On a local examination, there were bronchitic symptoms, the sound on percussion being unusually loud.

She was relieved, but not cured, by the treatment, and in July last again applied, complaining of constant dyspnœa, cough, palpitation, headache, &c.; the countenance being cadaverous, but not purplish; the lips rather red; the pulse small, soft, 100; the impulse of the heart weak, with local symptoms of emphysema, bronchitis, and slight dilatation of the right side, the latter not being well marked. From this time up to the end of September, when I ceased attending her, the dyspnœa increased, remaining permanent; agitation of mind, a full meal, or any attempt at exercise, increased it considerably, causing violent fits of palpitation and cough, terminating with copious expectoration of frothy and thick yellowish fluid. She remained in this condition until the 29th of October, when her brother's death being communicated to her rather suddenly, she became worse, and a most profuse discharge of blood took place per vaginam, without pain, which continuing, Mr. Dyte was sent for, by whom she was attended for three days previously to her death, which took place rather suddenly, and without a struggle, her mind being perfectly calm and collected. After some trouble, permission was granted to examine the chest, which was done by Mr. Dyte and self.

Old pleuritic adhesions of the upper lobe of the left lung; both lungs highly emphysematous throughout, the air-cells being much dilated, varying in size from a millet-seed to that of a large filbert, the largest being found on the surface immediately below the pleura; the cellular tissue was emphysematous, principally taking the course of the bronchial tubes. But little blood flowed on the section of the lung, and that fluid and black; the smaller bronchial tubes were filled with a yellowish puriform fluid, thick and tenacious, much resembling the contents of a tubercular cavity, without any albuminous shreds; a few crude tubercles were scattered through the left lung, but no cavities. The left side of the heart was thin and pale; its parietes flaccid, and not containing any blood; the right side was partially filled with black semi-coagulated blood; the cavity of both the auricle and ventricle larger than of the left, and about half the thickness or a little more; the blood contained in the large blood-vessels was black and fluid. An examination of the head was not allowed.

ON THE MICROSCOPE.

MEANS OF REMEDYING THE DEFECT OF ARTIFICIAL LIGHT.

To the Editor of the Medical Gazette.

Sir,

Should the following observations appear to you to fall within the scope

of your journal, I should feel obliged by your giving them an early insertion.

Your obedient servant,

J. W. GRIFFITH, M.D. F.L.S.

9, St. John's Square,
Nov. 13th, 1843.

Although matters relating to the microscope as an optical instrument do not, perhaps, belong properly to medical science, still, as the study of the microscope is now becoming, or has already become, a branch of medical study, any information tending to render its application more easy, and its use less injurious, will, I hope, prove neither unacceptable nor useless to the medical reader.

It must have been repeatedly noticed, by microscopic observers of any experience, that the only agreeable time for making minute observations is during day-light, and that examinations made at this time only can be relied on. The pure white day-light, furnished by reflection of the sun's rays from large floating cumuli, is that which best illuminates microscopic objects; whilst the orange or reddish-yellowish light of a lamp or candle wearies the eye incomparably more than the softness of day-light. There is also a marked glare with candle or lamp light: this is very annoying to most observers; so much so as to compel many to use the microscope by day-light alone, which few can have the opportunity of doing. To remedy this defect of artificial light, by showing the method of rendering it as white as daylight, is the object of the present communication.

The imperfections of lamp or candle-light appear to me to arise mainly from two causes: 1st, its being monochromatic; 2dly, the colour in excess being that which is most intensely luminous, viz. yellow. The first renders us totally unable to appreciate colour; the second causes a very unpleasant and injurious glare. It occurred to me that these might be overcome from the following considerations.

It is well known that, by the combination of a certain colour formed by the mixture of those existing in one portion of the spectrum, with that formed from the mixture of those remaining, that white light is produced. The two colours formed by these combinations, each consisting of that colour which the other requires to compose white light, are called, for that reason, complimentary to each other. All we have to do, then, to render a reddish-yellow light white, is to mix with that colour the complimentary one. The colour must vary according to the nature of the light, and the quality of the combustible: if the light be reddish, a pale green glass, in addition to the blue, will be requisite. The readiest mode of ascertaining the proper tint is to fit the polariscope to the microscope; then to place in the stage some crystallized salts belonging to any other system than the cubic; next to arrange the analyzer and polarizer so that their planes of polarization are at right angles: by examining thus several crystalline specimens, a portion may be always found which is of exactly the same colour as that of the flame (which must be found out by comparison) by then turning round the analyzer, so that the planes of polarization become parallel, the complimentary blue tint will be found, and a piece of glass of this colour will be the requisite one.

In applying this principle to the illumination of microscopic objects, I found that, by passing the light, in its passage from the candle or lamp, through a piece of deep blue glass, I could render the light, as I had anticipated, perfectly colourless. By this light bodies can be examined by night with the same perfection and accuracy as in day-light, without that fatigue occasioned by the monochromatic light; moreover, colours are distinctly recognised.

The modes of applying this contrivance are numerous: a substance soluble in tallow, and supplying the requisite tint during combustion, may be added in the formation of candles; or another head may be added to the illuminator of opaque objects, and a plate of glass of the proper colour fixed in it, this being placed as near the light as possible, and between it and the mirror of the microscope. Again, a piece of the coloured glass may be fixed in the condenser ordinarily used for transparent objects; or the lamp-glass itself may be made of the requisitely coloured material. The method of effecting this properly is to select the coloured glass by day-light, illu-

minating the microscope by a candle or lamp, and then placing the glass between the light and the mirror; the field will, if the glass be of a proper colour, appear of the same tint as the cloud light.

MEDICAL GAZETTE.

Friday, November 24, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

PROGRESSIVE CHANGES IN PRACTICE.

THE tendency of fact to become fiction, and the danger that long after the change has taken place it will continue to be believed and acted on as fact, is easily made evident; but the special embarrassments which such transformation causes are frequently felt to be unbearable, and therefore angrily shaken off with much of heat and impatience, from the true nature of the change not being perceived. The former scarcity of many drugs, the skill and capital required in their purchase, selection, and manipulation, and especially the scientific labours of the chemist, demanded an order of men possessed of a better education than that of most tradesmen, and raised the price of the materials in which they dealt. The information derived from studying and compounding prescriptions soon gave these men a practical knowledge of the medical uses of drugs —and made them practitioners. It was a fact in those days, or had been recently, that a certain skilfully compounded dose of medicine, duly bottled, corked, labelled, and otherwise technically treated, was worth eighteen pence, wholly independent of the skill required for its adaptation as a remedy to the particular case; for which a much larger sum had previously to be paid as the fee of the medical attendant. It was evidently a fact worth knowing, when it *was* a fact, for patients paid the money cheerfully, so that large ledgers were filled, and large fortunes made, in the shops of apothecaries in former days. The College of Physicians did all the head work, wrote prescriptions, made pharmacopœias, and went about seeing, smelling, and tasting, that the compounds were properly made, and had not got musty, while the Sovereign in Council threatened with royal displeasure any departure from the authorised formulæ, except by order of a learned physician. The apothecary likewise took the prescription from the house of the patient, and carried with it the directions which he received. He did not, however, long remain ignorant of the why and wherefore of his proceedings, but, as a naval commander, not content merely to carry sealed orders and ammunition, and to blaze away at the enemy, soon wants to know something of diplomacy, and puts other books on the shelves of his cabin than those on navigation, gunnery, and the articles of war, so the apothecary studied the theory and practice of medicine as well as the alembic, the herbal, and the pharmacopœia.

But he still continued to be paid merely for his drugs, though his skill in preparing them was become as nothing compared to the skill he had acquired in the practice of physic. Money was made hand over hand by the present fact, that he was almost always in attendance with the physician, and by the former fact, now become fiction, that each dose of medicine he gave (and many patients took six a day), was still worth eighteen pence. This was too good to last. The former fact had become a fiction; but it was convenient—it kept up the proper distinction between the apothecary and the physician; and, may we not add, was a tangible ma-

terial ground for the recovery of a disputed bill, such as would carry conviction to a jury, and enforce that remuneration as a right, for those professional services in sickness, which are so apt to be forgotten in health. The fiction, therefore, was kept up, that a dose of physic was worth eighteen pence, and the bills were presented and paid accordingly.

The public had got this fairly by heart; and now they began in various ways to be told another fact, namely, that the apothecary could write a prescription as well as compound the draught and superintend its operation. Still the disinterested attendant seemed to charge nothing for all this care and skill; the draught, which did the work, remained at eighteen pence. But a gratuity was often added to the bill; and if this was neglected one year, it was often suggested in the next by the word "attendance" put at the bottom, though without any charge; suggesting how much head work had been done for nothing, and how many physicians' fees had been saved.

By and by came distinct charges for visits, classically expressed in the ledgers by the word "iter;" and though these were often disputed, yet the majority of apothecaries becoming also surgeons, the claim was generally allowed, particularly in the country. But now the grocer, oilman, druggist, or whatever he may be called, seeing that *some* of these eighteen-penny draughts can be made for little more than the value of the bottle and the trouble of filling it—that he has got a steady hand, a clear head, a quick shopman, and a good character for intelligence with his customers, gets a Latin grammar and dictionary, and a young man to read prescriptions. He meekly suggests that he can afford to sell draughts for ninepence or a shilling, according to the nature of their ingredients. Chemists and druggists, making an enormous profit on their materials, with small outlay in learning the art of using them, their trade becomes highly lucrative, and their numbers increase rapidly, each addition to their number taking somewhat from the gains of the apothecary as a compounder of medicine.

The draught, however, still being in theory (and that theory supported by nearly all the doctors' bills extant,) worth eighteen pence, and the competing chemists selling it for much less, the value of a prescription, no matter how obtained, becomes very great. With a prescription, argues the public, we may be cured for a few shillings, or even pence; without one we must have a doctor, and a doctor's bill. A general begging, borrowing, and stealing of prescriptions begins. What cured Mrs. A. of the bile will cure Mrs. B. To be sure, says the druggist. The dose is not strong enough, can't it be increased? To be sure, says the druggist, "or, here is a form *we* keep, that I think might suit you better;" and so on, till a long bill at the druggist's is substituted for a long bill at the doctor's, and a good deal more physic is got for the same money.

Not long ago it was the custom to set off the fiction that the apothecary's draught was worth eighteen pence, with an assertion that the druggist's draught was not; that he had no interest in the patient's recovery, and that his drugs were very inferior, and adulterated. But two wrongs do not make right, and this has long ceased to be a fact at any respectable druggist's, though it is said that adulteration was formerly carried on to a great extent even in the first houses.

It has taken a good many years to impress strongly on the public mind

this fictitious notion of the intrinsic value of physic; and it will take a good many more to erase it; but not until it shall have been erased will the skill and science of the general practitioner receive its proportional and just remuneration. It is in each man's power to add his influence in the right direction; it will require intelligence, firmness, integrity, self-denial it may be; but many influences are at work to promote this desirable end. The educated pharmaceutical chemist, getting a deservedly high price for his really scientific exertions in his own valuable department, renounces the pilfering gains of counter-practice (*vide* Pharmaceutical Journal *passim*); and well educated general practitioners, who can afford to wait awhile for the practice which they are competent to conduct, will, it is to be hoped, bear an increased proportion to the needy two-session-men, when once it is made clear that the profession is overstocked, and that immediate employment cannot be obtained.

The failure of the Society of Apothecaries to protect its members against the manifold aggressions from without has arisen from the extreme difficulty and embarrassment which attend the exercise of its penal attributes. Two distinct offices have been virtually confided to the Society of Apothecaries: the one is, the confining their diploma or license to properly qualified persons; the other is, the defence of their own licentiates from the unfair competition, and the public from the inefficiency, of the unlicensed.

In the first of these duties their conduct has been most praiseworthy, and their success remarkable; they have gradually improved the course of study recommended, and increased the amount of information required, till their licentiates are forced into the acquisition of a highly creditable amount of professional knowledge. But as an engine of medical police, as the guardians of their own licentiates and the public health, they have signally failed, and the failures have been the inevitable consequence of a false position.

Practitioners of acknowledged competence have, in some instances, been attacked for practising creditably without their license; while ignorant persons have been allowed to secure a responsible and lucrative degree of medical practice under the pretext of selling drugs. This has raised some able practitioners, victims of their prosecutions, into martyrs, and many encroaching tradesmen, who have practised unscathed, into wealthy rivals. The more valuable effects of some recent trials in establishing the right of remuneration for attendance has come too late. Such right has long been tacitly conceded to the apothecary in all cases where the concession was worth having; those who are in good practice gradually dropping the custom of charging for items of drugs supplied. The poor, indeed, still pay for physic only; and this branch of the subject may be worth particular notice, and may furnish useful hints to the intelligent, industrious, and ill-paid general practitioner as to the best means of extrication from his present uncomfortable and undignified position.

We, for our parts, shall not be wanting in endeavouring to give a sound practical and profitable direction to prevailing discontents—from whatever quarter or whatever cause—persuaded that the candid admission of unpleasant truths is the best foundation for cautious reform.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

THE PRESIDENT IN THE CHAIR.

November 14, 1843.

An account of two cases of Rupture of the Ureter, or Pelvis of the Kidney, from external violence, followed by large effusion of urine into the abdomen. By EDWARD STANLEY, Esq. President, Surgeon to St. Bartholomew's Hospital.

THE first case was that of a boy aged nine years, whose pelvis had been squeezed between the wheel of a cart and the curb-stone. Extensive suppuration ensued in the contused parts around the pelvis; and several ounces of matter were discharged by puncture near the left sacro-iliac symphysis. At the end of six weeks, an oblong swelling was observed in the right side of the abdomen, extending from the margin of the ribs downwards, to within a short distance of Poupart's ligament, reaching anteriorly to the linea alba, and posteriorly to the lumbar region. By pressure deep fluctuation could be recognised; but there was no pain. The urine passed naturally. A small puncture was made in the swelling, and a little clear yellow fluid escaped. Three weeks afterwards, as the swelling had become more tense and pointed, it was punctured midway between the last rib and the crista ilii, with a small trochar, when fifty-one ounces of a clear yellow fluid were discharged. After the lapse of eleven days, the swelling having again enlarged, fifty-eight ounces were removed in a similar manner; and sixteen days afterwards, sixty-four ounces were discharged. The swelling now increased very slowly, on which account it was not interfered with for nearly three months, when it was again punctured, and seventy-two ounces of fluid of the same character as before, were removed. On being punctured three weeks afterwards, for the sixth and last time, only six ounces of fluid were obtained. After each operation some pain in the abdomen was produced, which was relieved by leeches. To reduce the swelling, a large blister was at one time applied, and the ointment of iodide of potassium was used for a considerable time, but neither of these measures appeared to be of any service. The general health of the patient continued good. As the tumor ceased to enlarge, and did not perceptibly diminish in size, the boy was discharged from the hospital, nine months after the occurrence of the accident. He has been subsequently seen by the writer of this paper in good health, the abdominal swelling being still distinct, although smaller, and with less evident fluctuation. The fluid which was drawn off was analysed at various times by Mr. Edward Ormerod and by Mr. Taylor; both of whom detected the presence of urea, and the other ordinary ingredients of urine.

The second case occurred in St Bartholomew's Hospital, under the care of Mr. Vincent. A woman was admitted immediately after having been knocked down by, and pushed some way before, the wheel of a cart. Her left femur was flattened, and she was besides much hurt, especially in the right hypochondrium, where pressure gave considerable pain. For several days she had much febrile disorder, accompanied by severe pain and distension in the abdomen, requiring venesection, the application of leeches, and calomel and antimony in frequently repeated doses. When the general distension and pain in the abdomen had subsided, there remained a circumscribed and painful swelling in the right hypochondrium, which it was thought must be connected with the liver. For some days the swelling increased, and fluctuation could at length be recognised; the patient, during this time, complaining of general chilliness, and having paroxysms of pain and throbbing in the swelling. It being supposed that abscess connected with the liver had taken place, a puncture was made in the swelling with a small trochar, when between two and three pints of a straw-coloured urinous smelling fluid were discharged. The urine had been throughout passed freely and in full quantity. In about ten days, the swelling having increased so as to occasion much distress, it was again punctured, and six pints of a fluid possessing the same characters as before were drawn off. In a few days the pain and swelling returned, and from this period the patient gradually sunk, and she died in the tenth week from the receipt of the injury. The fluid obtained from the abdomen was found to be albuminous, and to contain a small quantity of urea.

Upon examination of the body, a large cyst was found on the right side of the abdomen behind the peritoneum, extending upwards to the diaphragm, and downwards to the brim of the pelvis. A passage was found to extend from the upper part of this sac into the pelvis of the right kidney, the aperture being large and irregular, and such as might be expected to result from laceration of the membranous structure composing it. A preparation exhibiting the appearances in this case was on the table of the Society. The author concluded by adducing several arguments in support of his opinion, that either the ureter, or the pelvis of the kidney, had been ruptured in the first case, as was found by dissection to have happened in the second; and by adding practical remarks on

the effusion of urine into the cellular membrane.

Two Cases of Ulcer of the Stomach producing circumscribed Abscesses in the Peritoneum. By EDWARD J. SEYMOUR, M.D. F.R.S. Physician to St. George's Hospital.

The first of these cases occurred in a female servant, æt. 25, admitted into St. George's Hospital, Jan. 16, 1843. Two days previous to her admission, she had been attacked with sudden pain in the epigastrium and left hypochondrium, extending over the whole abdomen, accompanied by vomiting, which had, however, ceased. The countenance was sunken, and expressive of extreme distress; and there was pain over the whole abdomen, which was very tense and extremely tender. Notwithstanding the exhausted state of the patient, the presence of peritonitis, and the recent nature of the attack, indicated venesection. She was therefore bled to ℥xvj., ordered calomel and opium (gr. iii. and j.) every four hours, and a turpentine injection. She afterwards had leeches and fomentations; and on the 18th expressed herself as "greatly relieved, and without any pain in the belly." On the 19th, she suddenly complained of most acute pain in the epigastrium and left side. Pulse quick and small, with excessive palpitation. The pills were again ordered, and a blister applied, and the pains were greatly relieved. The dejections were now healthy, and the abdomen throughout could bear pressure; but the pain continued in the left hypochondrium, and extended to the chest, with occasional syncope and impossibility of breathing with the left lung. Aphthæ soon appeared in the mouth: the pills were omitted, and light nourishment given, and for two days she appeared to be relieved. Without any increase of symptoms, however, she died almost instantaneously on the 27th, ten days after admission.

Post-mortem examination. — *Abdomen:* The left part of the transverse colon, and the anterior margin of the left lobe of the liver, were united to the anterior parietes of the abdomen, so as to form a closed sac, which was filled with fœtid pus and some of the contents of the stomach. The left lobe of the liver was enlarged, and covered the greater part of the anterior surface of the stomach. On lifting up this portion, the contents of the stomach oozed out of a small aperture communicating with an ulcer situated about an inch below the middle part of the lesser curvature; its size was less than a shilling, and its shape oblong; the vascularity of the mucous membrane around it was but slightly increased. Another small ulcer was found at the lower part of the posterior wall, which had nearly destroyed the mucous membrane. The convolutions of the small intestines were glued together by recently effused lymph. *Thorax:* The lower part of left lung united by lymph to diaphragm; lung healthy. Pericardium contained serum mixed with recent lymph.

The second case was also a female servant, aged 20, who had been ill for several months, was pale and emaciated, and complained of severe pain in the right hypochondrium and around the umbilicus. Pulse quick and weak; tongue red and glazed; had taken much purgative medicine without relief. About ten days after her admission she was attacked suddenly with violent palpitation of the heart; the pulse was quick and weak, and the skin cold; for the first time she coughed, and expectorated dirty purulent matter, very fœtid. The matter being spit up freely, the patient's state improved, and she asked occasionally for food. On the 8th of December (a fortnight after admission), without any increase of symptoms, and after having taken breakfast, she suddenly expired.

Post-mortem examination.—The transverse colon, liver, and stomach, were glued together by old and firm adhesions, and in endeavouring to separate them, the parietes of the stomach gave way. On its posterior surface, towards the great curvature, was a large ulcer, which had destroyed all the coats, the deficiency being made up by the pancreas, adhering to the circumference of the ulcer. The remaining part of the mucous membrane of the stomach was somewhat thickened, but otherwise healthy. The upper surface of the right lobe of the liver was partially adherent to the diaphragm; the adhesions formed the walls of an abscess the size of a child's head, bounded above by the diaphragm, below by the liver, and on either side by the union of the diaphragmatic and hepatic layers of peritoneum. The matter in this cavity had ulcerated through the diaphragm, and made its way into the substance of the right lung, communicating with several of the larger bronchial tubes. There was a small quantity of serum in the right sac of the pleura. The right lung, with the exception of the adhesions to the diaphragm and the ulceration of the bronchial tubes, was quite healthy. In the left lung several patches of grey hepatization.

The author remarks that there are many cases on record of the perforating ulcer of the stomach. Those now related are remarkable, both from the length of time which elapsed between perforation of the stomach, and the death of the patient (almost every case on record, where the perforation was complete, having proved fatal within twenty-four hours of the attack), and also from the entire absence of vomiting after the first few hours. He alludes to the

prevalent opinion, that these cases, if not peculiar to, are far more frequent in females than in males; but an examination of the cases on record, he says, proves there is no foundation for such a conclusion, as they are nearly equally divided between the two sexes. In the ten recorded by Mons. Cruveilhier, nine occurred in men, and one only in a woman.

PROFESSIONAL ETIQUETTE.

To the Editor of the Medical Gazette.

SIR,

I TRUST that as the arbitrator of medical differences and the guardian of professional etiquette you will give an early insertion to the following statement in your valuable journal. Occasional editorial notices of such subjects promote a gentlemanly feeling, and maintain a wholesome discipline in the medical body. Your own opinion therefore of the case, with a few of your usually judicious comments on the principles that should regulate the conduct of practitioners in their professional intercourse, would much oblige, sir, your obedient servant,

A GENERAL PRACTITIONER.

Nov. 15, 1843.

A family removed in March last to my immediate neighbourhood from a locality six miles distant. They had there been attended for some years by a general practitioner. The lady, at the time of her removal, was within two months of her confinement. I was several times in attendance previous to this event; but as her old attendant was engaged before her change of residence, and had also attended her on a former and similar occasion, she wished him to do so on this. He accordingly did so. Three months afterwards I was again consulted for various maladies, and among them on account of a swelling in the breast, accompanied with pain, heat, and occasional redness. For this I prescribed purgative and alterative medicine, with leeches, cold lotion, &c. and enjoined attention to diet. Under this mode of treatment the symptoms of inflammation considerably abated, but the swelling still remained, and seemed to take a more definite form.

Well knowing the extreme difficulty of diagnosis in incipient affections of the breast, and the importance of giving early attention to them, I urged my patient to take the opinion of Sir Benjamin Brodie; at the same time saying I considered it impossible for any one (however great his tact or extended his experience,) to decide in its present stage. It might be a milk tumor, a chronic abscess, or a simple or some other tumor; possibly, though not probably, one of the malignant forms.

Things being in this state, the original medical attendant chanced to make a friendly call, and in the course of conversation the lady directed his attention to her breast. He examined it, and, *knowing* it was under my care, gave an opinion as to what the case was, when I had expressed myself unable to do so (that opinion being that it was a milk tumor), and left a prescription, directing it to be shewn to me. He was informed that the patient, at my suggestion, was about to consult Sir Benjamin, when he observed that she could not do better, and offered to accompany her himself; and upon her declining (for it was my expressed intention to go with her), he said that if *his* name was mentioned to Sir Benjamin, she would receive every attention, because he had originally been his pupil, and proposed that Sir Benjamin should write to him, on the ground that he would tell *him* what he would conceal from *her;* thus, as far as he could, taking the case out of my hands, thrusting himself forward, and most unceremoniously throwing me in the background.

The patient has since consulted Sir Benjamin, who (if any one) has a right to dogmatize: he, however, with judicious caution, refused to give his opinion till he had again seen her at the expiration of a fortnight. He has just seen her the second time, and still feels unable to decide, though he leans to the opinion that it will prove to be an abscess.

I felt that the conduct of this practitioner was indelicate and uncourteous—not that which one gentleman should show to another—not that which might be expected from the member of an enlightened, liberal, and scientific profession; for I have ever found the man of science to be the man of humility, in accordance with the opinion of Lord Bacon, that "it is the nature of true knowledge to make man humble;" and where this humility exists, there will always be a respect for the opinions, and a considerate regard for the feelings, of others. Ignorance and presumption generally go hand in hand, whilst knowledge and humility are as inseparable companions.

Of the endowments and acquisitions of the party in question I am as ignorant as I am of his person, never having seen him; therefore these latter observations must be regarded as made in the abstract. It may, perhaps, be justice for me to state that he condescended to say my treatment was "perfectly right."

I have for many years been in the habit of attending *with*, and *for very many* of, my brother practitioners; and I am happy to say I never experienced from any of them similar treatment.

DEATH OF MR. RUMSEY.

Died on the 23d ultimo, at Gloucester, in his 78th year, Henry Rumsey, Esq. one of the oldest members of the College of Surgeons, and during fifty years an able and highly respected practitioner at Chesham in Buckinghamshire; where he succeeded his father, Henry Rumsey, who also practised for fifty years honourably and successfully in the same place, leaving at his decease two sons, the late Dr. Rumsey, of Amersham, who died in 1824, and the subject of this notice.

UNIVERSITY OF LONDON.

M.B. SECOND EXAMINATION.—1843.

First Division.

	Medical Schools.
Ballard, E.	University College.
Barnes, R.	Adjs St. George's Hosp.
Barnett, A.	London Hospital.
Browne, J. H.	Guy's Hospital.
Davies, J. J.	London Hospital.
Fearnside, H.	University College.
Heath, G. Y.	University College.
Humble, W. E.	University College.
Leonard, T.	University College.
Manson, F. R.	King's College.
Rees, G. A.	St. Bartholomew's Hosp.
Rubidge, R. N.	Guy's Hospital.
Spitta, R. J.	St. George's Hospital.
Stedman, S. S.	University College.
Tapson, A. J.	University College.
Topham, J.	University College.
Ward, S. H.	London Hospital.

Second Division.

Bell, H.	Guy's Hospital.
Francis, C. R.	Middlesex Hospital.
Jones, T. L.	University College.
Snow, J.	Westminster Hospital.

BOOKS RECEIVED FOR REVIEW.

Cases of Dropsical Ovaria removed by the large Abdominal Section. By D. Henry Walne, Surgeon.

The British Journal of Homœopathy, Vol. 1.

New Methods of Alkalimetry, and of determining the Commercial Value of Acids and Manganese. By Drs. C. R. Fresenius and H. Will. Edited by Lloyd Bullock.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, November 17, 1843.

J. Hanks. — F. Meheux. — L. Powell. — H. Daubeny.—L. Bland. — F. A. Oldaker.—H. M. Webb.—W. D. Headly.—E. Thomas.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, November 16, 1843.

J. B. Bramwell, North Shields.—E. Johnson. —F. G. O'Kearney, Chilcompton.—W. B. Herapath, Bristol.—T. Bodkin, Bermondsey, London. —E. Lloyd, Tamworth.—E. B. Tuson, Ilchester. —T. Collingwood, Rochdale. — J. H. Kimbell, Knowle, Warwickshire.—J. H. Blount.—E. Miller.—G. F. Hodgson.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, November 11, 1843.

Small Pox	7
Measles	32
Scarlatina	60
Hooping Cough	30
Croup	8
Thrush	5
Diarrhœa	12
Dysentery	1
Cholera	1
Influenza	3
Ague	0
Remittent Fever	0
Typhus	34
Erysipelas	2
Syphilis	2
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	166
Diseases of the Lungs and other Organs of Respiration	344
Diseases of the Heart and Blood-vessels	30
Diseases of the Stomach, Liver, and other Organs of Digestion	67
Diseases of the Kidneys, &c.	7
Childbed	9
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	0
Arthritis	0
Rheumatism	1
Diseases of Joints, &c.	0
Carbuncle	0
Phlegmon	1
Ulcer	0
Fistula	2
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	104
Old Age or Natural Decay	68
Deaths by Violence, Privation, or Intemperance	18
Causes not specified	2
Deaths from all Causes	1016

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ *W. of Greenwich.*

October.	Thermometer.		Barometer.	
Wednesday 15	from 29	to 39	29·86	to 29·74
Thursday . 16	45	32	29·63	29·72
Friday . . . 17	28	47*	29·60	29·40
Saturday . 18	48	38	29·31	29·28
Sunday . . 19	29	45	29·42	29.52
Monday . . 20	39	49	29·24	29·46
Tuesday . 21	39	57*	29·38	29·28

Wind, N.W. and W. on the 15th; N. by W. on the 16th; E. by S. and S. on the 17th; S.W. on the 18th, and three following days.

The 15th, generally clear till the evening; lightning in the E. and N.E. about 8 P.M. 16th, generally clear. 17th, cloudy, rain in the evening. 18th and 19th, generally clear. 20th, morning cloudy, afternoon and evening clear; very high wind during the night of the 19th and morning of the 20th. 21st, morning and evening cloudy: sun at times about noon.

* The maximum of temperature on these two days, the 17th and 21st, occurred at 8 P.M. and on the 21st the thermometer remained at 57 till midnight, perhaps later.

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, DECEMBER 1, 1843.

CLINICAL REMARKS ON STRICTURE OF THE URETHRA, WITH ITS TREATMENT.

By B. Phillips, F.R.S.

We have in this establishment a large number of old men, of whom many are constantly under treatment for disease of the urinary organs. Many suffer from stricture of the urethra; and to this division of the subject I now wish to direct your attention.

You must recollect, for it was under treatment not long ago, a case where, from the sensibility of the canal, I was obliged again and again to abandon the use of bougies for a time, even after we had succeeded in passing them through the stricture: in that case we at last smeared the membrane in the neighbourhood of the stricture with lunar caustic: you must recollect, also, how very remarkable was the effect—how perfectly well we were enabled to proceed with the bougie.

You may think that the foregoing, as well as the succeeding cases, were commonplace enough; so they are, but they are like such as you may expect to meet with in practice; and they are not always easy to treat, and it is for these reasons that I speak of them.

W. M. aged 45, had stricture of the urethra of long standing, which had given birth to several attacks of complete retention. On each occasion he had been relieved by introducing an instrument and keeping it in contact with the stricture until a strong desire to make water was felt; the instrument was then withdrawn, and a little water dribbled away after it. When I commenced the treatment of this case, a metallic flexible bougie was introduced several times, and kept firmly in contact with the stricture for an hour without penetrating into it. At last it passed on, and for more than an inch the passage felt rough. The dilating plan was followed up, the instruments were left in the urethra for an hour each time, and at last the canal was restored nearly to its natural condition. In this case the tendency to contract anew was very slight—so slight that as much as six months have passed without the introduction of a bougie.

W. W. aged 41, had stricture of many years' standing, for which the treatment by dilatation had often been employed. His sole complaint was of the difficulty of making water, and the frequency of the desire. I attempted, but without success, on four occasions to pass bougies of the smallest size, both plaster and catgut. I then introduced, every second or third day, a No. 8: I kept it in contact with the stricture for an hour each time, and on the sixth trial it passed on. From this time the bougies were gradually enlarged; they were always kept in the urethra from half an hour to an hour, until the natural calibre of the canal was restored. At present he passes a bougie once a month, but he always finds that a sensible contraction has taken place in the interval.

The two men now present, and the one lately discharged, have exhibited no complication beyond a certain amount of irritability of the bladder, though in each the stricture was so close that nothing was passed through it for many days. You saw me try again and again to introduce bougies of the smallest size, and as often fail. You have also seen that we then resorted to the use of larger sized bougies, and that after failing several times, the instrument, by patience and perseverance, has passed on to the bladder. One of these men will be discharged to-morrow, but with the injunction to come here once a month, or oftener if necessary. In the third case we have passed two strictures, but we have not yet conquered the third.

You have lately seen under treatment other cases of what are called very close strictures of the urethra. They were none

of them so close but that water would dribble away; but they were all too close to admit the smallest sized bougie.

In those, as in most of the cases I have ever seen, the contraction succeeded to one or more attacks of gonorrhœa, and was, in fact, owing to an induration of the walls of the canal as a consequence of the inflammatory action set up at the part by a gonorrhœa. You will often hear of a kind of stricture which is believed to be independent of any such thickening; it is called *spasmodic*. If by a spasmodic stricture be meant an obstacle existing in the canal of the urethra to the passage of the urine, independent of any structural lesion, I believe it is of very rare occurrence, if, indeed, it can happen at all: but if we attach to it another signification—that it is a state of spasm determined by disease existing in the canal—then, undoubtedly, we may often meet with it. It is very rare that a permanent stricture, as it is termed, completely blocks up the canal, but as it prevents the bladder from completely emptying itself, the urine becomes more and more acrid, and when it comes into contact with the stricture it induces a certain amount of spasm, or at least increased contraction.

By a *permanent* stricture we mean a material obstacle to the passage of the urine on the one hand, and of a dilating instrument on the other, that obstacle being almost always constituted by a thickening of the walls of the urethra, the result of inflammatory action set up at the part. In most of the cases I have examined, the thickening has extended to a certain distance on either side of the point of greatest contraction, and has not much changed the character of the mucous tissue itself, but has principally affected the sub-mucous tissue; and this is a point which it is essential you should bear in mind for reasons which will appear hereafter.

You may find what are termed *bridle-strictures*, of which you can see a representation in Sir Charles Bell's work on the Urethra, but they are not often met with. How they are formed it is not very easy to determine. Goulard seemed to think they were constituted by a fold of mucous membrane. Morgagni regarded them as the results of small ulcers, and probably he was near the truth. Some pathologists have conceived them to be a kind of false membrane.

The older pathologists thought urethral obstructions were mostly caused by *excrescences*, *fungous growths*, or *polypi*. That such things have been met with in practice has been abundantly proved, but it is equally clear that the occurrence is extremely unfrequent.

You may find the urethra blocked up at or near the orifice; when this happens, the affection is either congenital—a malformation—or it is caused by violence, or is the result of ulceration. You may find the obstruction in the navicular fossa. It is then caused either by the retention of a calculus at the point, or by the consequences of gonorrhœal inflammation. You are aware that the external orifice is the narrowest part of the urethra; a particle of calculous matter may pass along the urethra until it gets near the meatus; it is too large to escape, and it is there retained, and may set up enough of irritation to produce thickening and contraction. The seat of inflammatory action during the acute period of a gonorrhœa is not far from the orifice; and a contraction may result from the inflammation so set up: but this does not happen frequently. Stricture is not commonly the result of acute, but of chronic, inflammation, which is not often found in that situation. You may find a stricture at any point between the navicular fossa and the curvature, and its occurrence is not rare; but it is at the curvature of the canal that strictures are commonly found. When we consider that this is the region where chronic inflammation is so commonly seated, that here the direction of the canal is so changed that harm may be done by the imprudent use of instruments, it is not surprising that it should be, *par excellence*, the seat of stricture.

Of the causes of stricture, out of all proportion the most frequent is gonorrhœa: probably out of every 100 cases of stricture which may come under observation 98 or 99 are owing to that cause. Many persons hold a different opinion, and say, if gonorrhœa be the common cause, how comes it that stricture is not most commonly found in the navicular fossa, which is, it is said, the seat of gonorrhœal inflammation? I have already stated that stricture is not commonly produced by acute inflammation; it is usually the result of a chronic long-continued action. Whatever may be the common situation of acute action in gonorrhœa—and it is by no means proved that it is the navicular fossa—certainly when chronic it is ordinarily found near the curvature. I have, however, known stricture to be produced by the injury done to the urethra by chordee. Some people think that strictures are more commonly the result of astringent injections than of gonorrhœa. A gonorrhœa cured in a moderate time does not, it is true, often produce stricture; but when the acute symptoms gradually give place to a protracted chronic discharge, then contraction may be looked for as an impending evil. I do not mean that a slight discharge, though continued for months, or even years, is necessarily the precursor of stricture, but it is nevertheless true that commonly it is so. Now it is to cure those chronic discharges that injections are commonly used, and it is

rather a strong measure, under these circumstances, to refer the stricture to the injection rather than to the disease for which the injection has been used. In most cases the injection used gives no pain, and then no harm need be expected from it; but if it be painful, if it increase the inflammation at the diseased point, it may of course do harm. There is an opinion that the use of the bougie or the sound as a curative agent is a frequent cause of stricture. I hope this is incorrect, and think it is so. That many people fancy they have stricture when they have not, and that they proceed to consult a medical man on the subject, is true; that he examines the canal by passing an instrument along it, is also true; that if he be wanting in the necessary dexterity he may do harm, more particularly about the curvature, I cannot deny; that because there was some difficulty in passing the instrument he has used undue force, and done an injury which may lay the foundation of stricture, is of course possible. In point of fact, I have known patients who have had bougies introduced for months, sometimes with much pain, who previous to treatment made water by a full stream. But at last the number of men who go to be treated for stricture when the urethra is empty is comparatively small. I do not doubt, however, that strictures are often made worse by the mode in which they are treated. Strictures are sometimes produced by external violence. I have more than once known them to happen from contusion of the perineum upon the pummel of the saddle causing laceration of the canal. I have known them to follow the use of lithotrity instruments. They may happen, indeed, from any cause capable of setting up inflammatory action in the canal.

The ordinary signs of stricture are usually pretty well marked; for some time there has been a discharge, it may be so trifling in quantity as barely to mark the linen; it is slightly increased by any irregularity, still it is very little: it is usually the sequel of a gonorrhœa. There may be no other inconvenience complained of. The diminution of the stream is so gradual that it is not noticed; at last, the contraction, slowly as it grows, prevents the bladder from completely emptying itself, because the bladder, like every other muscular structure, is incapable of continued action beyond a certain time; that time is long enough to allow of the complete evacuation when things are in a natural state, but when the bladder is allowed to get too full the expulsive action is frequently not sufficiently sustained for the escape of all the contents. So when the canal of the urethra is made smaller than natural, a similar result follows. In this state of things a certain portion of the contents of the bladder are constantly retained, and the desire to make water becomes in consequence more frequent. Instead of lying in bed from night till morning, he is disturbed once or oftener in the night, and then he goes to his medical man. Not, perhaps, because he thinks he has stricture, but because he has a little annoying discharge, and a frequent desire to make water. To the medical man the history of the case seems to point clearly to stricture; but he does not pronounce a positive opinion until he has passed a bougie along the urethra.

In many cases, however, we are not consulted until the stream becomes extremely small; or even until the urine dribbles away drop by drop, with a constantly recurring desire; with, perhaps, the parietes of the urethra behind the stricture giving way, to be followed by urinary abscess and fistula, or with some damage done to the prostate, the spermatic organs, the bladder, or the kidney. In this state complete retention is always impending; any slight irritation may cause the complete blocking up of a passage which before was barely pervious.

Now when you are called on to treat a case of stricture, the fact of the patient being able to pass even a very small quantity of urine, and that even with much straining, and the case where he cannot pass any, are capital points of difference. In the one case you have time before you, in the other every quarter of an hour may be doing much to seal the patient's doom.

Let us take the first case: the patient can pass a little water, though with much effort; your attention must be directed to make the passage larger, and for this purpose many agents have been recommended; but for practical purposes they may be reduced to two, *dilatation* and *cauterization;* for I will assume that under ordinary circumstances a prudent surgeon will not resort to any more violent means when the patient can still pass water a little at a time. Both those means have been regarded as permanently curative agents, the one acting, as has been supposed, by causing absorption of the morbid products by pressure, the other causing the destruction of the same product; the canal in either case remaining free. Once for all I tell you, that in cases of permanent stricture this is a result which you will not commonly witness, whether you employ the one agent or the other. You may make the patient's life comfortable; you may remove the danger which threatened him; but like suspected characters he must be ever after under "surveillance." I do not wish you to understand that this is the unvarying result, but still it is so common a one, that you must regard it as the rule.

Now let us see how these agents act; let us endeavour to estimate their relative value in

cases such as we are now treating of; and let us begin with *dilatation*. As a certain portion of water will dribble away, no violent means are necessary; neither is it imperative that the obstacle should be overcome at once. You must, therefore, be content to try mild means. The common plan is to pass a bougie to the part and insinuate it into the stricture, but as this is often not practicable, much unnecessary poking follows, and the evil may in this way be rather increased than lessened. You have been accustomed to see me pursue a different course, and I need hardly say, that I think it a better one. In two of the cases you have just seen, the strictures were so narrow that the smallest size elastic gum instrument did not penetrate into them; still you see that one of the patients can himself already pass a No. 10 bougie into the bladder, and I trust the other will be able to do so in a fortnight. In all these cases I use a moderate size instrument: I pass it down to the contracted point, and I direct the patient to keep it firmly in contact with the stricture for an hour, if he can bear it without much discomfort; if not, for a shorter time. In some cases, by the end of an hour, the instrument will pass on to the bladder; in others it has to be repeated three, four, five, or six times before the obstacle is passed: there are cases where even a longer time may be necessary, but usually, if properly done, half a dozen sittings will enable you to get through the majority of cases. When your instrument has passed through the stricture the remaining treatment is usually easy, but there are certain things to be borne in mind: do not be in too much haste, do not introduce the instrument too frequently, do not enlarge the canal too quickly. You may find the urethra become too sensible to allow of your going on, many days may pass before you can prudently use it again, and when you do you will find the parts resuming their former state.

Some persons regard the bougie as a *curative* agent in stricture, under ordinary circumstances. I do not think so. I always recommend a patient who has suffered from permanent stricture, and whose urethra has been made free by dilatation, to watch narrowly the size of the stream of water, and even though he may not observe that it is lessening, he will do well to pass a bougie himself, from time to time, to assure himself that the canal is kept free. The frequency with which it should be done must depend upon the case; one man will find it necessary to do it once a week or oftener; another will let one or more months pass without finding the introduction of a bougie necessary.

As to the treatment by dilatation, it is certain that bougies may be used with less pain and danger than any other agent we can employ; they adapt themselves more easily to the curvatures, and excite less irritation, than metallic instruments, and the good is gradually achieved. The important question, at last, is this; do they merely act like a wedge, simply pushing the sides of the canal apart, and flattening any projections which may be found there? or do they cause the entire removal of the morbid product which constituted the stricture, so as to leave the parts in a natural state? I cannot doubt that, occasionally, a perfect cure is accomplished by the use of bougies; but it is difficult to say what was the exact condition of the parts in those particular cases. It is a notorious fact that, commonly, a permanent cure is not effected, and that the necessity for occasionally passing a bougie remains. I come, therefore, to the conclusion that the pressure of a bougie is, in a large proportion of cases, insufficient to procure the removal of the indurated matter causing the obstruction. Still, when dilatation is discreetly employed, the relapses are much less frequent than when it is imprudently employed. It is unwise to dilate too rapidly; whenever you do so, the return of the trouble is prompt also. You may, in the course of forty-eight hours, pass a No. 12 bougie into the urethra, which, two days before, would not admit a No. 2. This mode of proceeding is objectionable for two reasons: you are treating the urethra as an inert canal, you may induce in it very troublesome inflammation, and by the end of a week you may be prevented from proceeding further, and in another week the evil may be more serious than when the treatment was commenced: the indurated matter was not absorbed, but only put aside. The prudent plan I conceive to be what you see employed here. Do not irritate the part by poking against the stricture a small bougie, which at last will perhaps not penetrate, and may make matters worse. Introduce a moderate sized bougie, keep it firmly and equably supported against the obstruction, let it remain there as large a portion of an hour as it can be borne without inconvenience. If it will not pass on by that time, remove it; and if the urethra be in a quiet state, you may repeat the operation on the morrow, always letting the instrument remain in the canal as much as a quarter of an hour if there be no discomfort; if the patient complain of tenderness, you may let one, two, or more days pass before you subject your patient to a second attempt. In this way you proceed until the instrument passes on; you then gradually enlarge your instrument; and you must be guided as to the frequency of the introduction by the state of the canal. If the treatment can be

borne every day, there is no reason why it should not be followed up; if the sensibility be excited, you may do it every second or third day. When the canal is dilated sufficiently, you then lengthen the interval; at first you make it a week, then a fortnight, a month, or even longer; but ultimately the period of introducing the instrument must depend upon the tendency to contraction which may be manifested. You should, when the canal is free, teach a patient (unless you fear to trust him) to pass the bougie himself. If he be a private patient he will find it can be passed most easily before he gets up in the morning. So much I may say, that the relapses after the treatment of bougies are more manageable than those which follow cauterisation or scarification.

Again and again *cauterisation* has been proposed as *the* means of curing stricture of the urethra; still, at the present moment, it is little used in this country. This must be owing to one of the following circumstances: either the application of the remedy is difficult, the inconveniences attending upon its use are real and established, or the cure is not permanent. Many different caustic substances have been used, but at present it is upon the nitrate of silver and the caustic potash that most reliance is placed. Whatever caustic is used, the intention with which it is usually employed is to destroy the indurated matter which constitutes the obstacle.

Then, again, as to the mode of applying it: by some it has been sought to bring it in contact with the interior surface of the stricture; others have been content to apply it upon the anterior surface. We will now inquire, first, as to the practicability or prudence of *destroying* the morbid product; secondly, into the *mode* by which the caustic can be best employed; thirdly, whether, when used, *the cure is permanent.*

It is now a well ascertained fact, that the mucous surface itself is not much changed at the contracted point; that the indurated product is fairly and altogether outside of the mucous surface, very much limited to the submucous tissue, but continuous with the adherent portion of the mucous tissue. Now if that be, as I believe it to be, a well-established fact, it follows that, if destruction be carried out to the extent intended, there must be complete destruction of the entire thickness of the mucous membrane. In that case I apprehend a cicatrix would follow, which would occasion a contraction much more difficult to overcome than that to which it has succeeded. Although I by no means deny that the whole thickness of a mucous membrane may be destroyed by caustic, yet it is much less easily accomplished than may at first sight seem possible. I have many times applied lunar caustic upon the mucous membrane of the vagina, but I have never destroyed the membrane by it so as to get a cicatrix. If you apply it again and again to the mucous membrane of the cheek, you will find you make very little progress; and I apprehend that, in the common run of cases in which caustic is applied to the urethra, the continuity of mucous membrane is not destroyed; the morbid product outside of it cannot therefore be destroyed. Eschars are no doubt formed and thrown off, but they make little impression upon the membrane of the urethra. It is unquestionably true that in twenty-four hours, or even much less, after the application of caustic, the patient may make water better than he did before the operation; but this is not because a part of the obstacle has been removed, for by that time the eschar is not come away, but because the morbid sensibility of the part is for the moment extinguished, and the urine passes over the point without exciting the parts to contract. I apprehend, therefore, that, in the majority of cases, the improvement which is often observed is owing much more to the extinction of irritability than to the destruction of the tissue. At the same time, a dilating instrument, a bougie on the one hand, a porte-caustique on the other, is kept steadily in contact with the part, and in the end the obstacle is passed.

For a long time caustic was applied to the anterior part of the stricture by means of the armed bougie: and when we know that it has been applied to a single stricture as many as two hundred times, we may readily admit how little destruction of tissue must follow each application. In all cases it is likely to act on the healthy tissue, and to cause accidents, among which tumefaction, threatening retention and hæmorrhage, were not the least frequent. The evils of this plan were long felt: at last it was proposed to avoid them by carrying the caustic fairly within the stricture, and applying it there, as it were from within outwards. From this method of applying the caustic much was expected; its action was to be confined to the morbid growth, and when the first eschar was thrown off, the opening was to be enlarged by so much. The objection to this plan is, that if you have to treat a close stricture, you cannot get your caustic into it; you must first enlarge the opening by bougies before you can use the caustic; and when so much has been done by bougies, it may be said why not go on with them?

Now let me say a few words on the relative advantages of dilatation and cauterisation. There was a time when I felt a strong conviction that caustic was the most

certain curative agent in the treatment of stricture; a longer experience has satisfied me that that conviction was not well founded. I believe we know no means of effecting a permanent cure of advanced cases of stricture, but I think the best means we possess is the prudent employment of dilatation. You can always make the canal free by this means; and although it will commonly manifest a tendency to contract anew, yet the occasional introduction of a bougie may prevent this disposition from proceeding so far as to cause inconvenience. I do not doubt the cures that have been attributed to caustic; but in my opinion they have been mainly owing to the dilatation exercised by bougies and porte-caustiques employed in the treatment. I apprehend the good derived from the use of caustic is owing to the modification of the sensibility of the canal, which has allowed of a more unreserved use of dilating bodies than could have been had without it. It is possible that the irritation of the caustic may do something towards exciting the absorption of the morbid product, and that which the bougie could not do alone might be effected by such an association. Still it must be admitted that, whether each plan be used alone, or whether they be employed in combination, the tendency to contract anew is commonly observed, and is best arrested by the occasional use of the bougie.

Although the remedy is in the patient's own hands, when the diameter of the canal has been once restored—although the remedy can be applied with scarcely any inconvenience, and notwithstanding that you have pointed out to him all the evils that may result from neglect of the means that you put into his hands—it is astonishing how little you can trust to the patients using them. A patient who has suffered severely once, and who has been made comfortable by treatment, will most likely suffer severely again. He will tell you that he had not perceived any diminution in the size of the stream, and that therefore he did not think it worth while to pass the bougie; at last he gets alarmed, and finds he cannot pass it at all, makes many attempts to do so, perhaps irritates the canal, and may induce retention. This is the common history of such cases.

At our next meeting we will consider the more pressing and serious of the evils which are determined by stricture of the urethra.

ON CONSTITUTIONAL IRRITATION*, OR GENERAL DISTURBANCE.

By T. Wilkinson King.

Introductory Considerations.

Definition—A plan of the relation of the animal functions. Humoral agencies and their advocates. Varieties of assimilation—plan—The influence of the generative functions, of exercise, of the capillaries, and of the arteries.

Constitutional irritation is a general term for the phenomena of disturbance in the entire body, or for the cause which excites them. Disordered processes of health in countless variety comprise these phenomena. To unfold here and there one of these processes, to shew its connection with external causes, its influence on the other processes of the system, and its tendency towards restoration, or its end in destruction; these are our present objects. The ultimate aim by which we are actuated is no less than the hope of extending and clearing up the true basis of medicine; the rationale of health, disease, and remedies.

To obtain accurate information of the strength of the enemy, the point of his first attack, the course of his subsequent efforts to overrun and destroy, and to attack or defend with due regard to means and opportunities, are the essential objects of the general who combats diseases.

Having formerly defined, and partially illustrated, irritation as disturbance, whether nutrient, inflammatory, secretory, or nervous; and having endeavoured to explain a good variety of the forms of local irritation, and in some measure to illustrate the opinion, that the occasional differences in any one kind are in part regulated by the diathesis of the individual; and having observed that local disorders have a certain degree of influence over the states of other parts of the body not primarily affected, we naturally approach the study of those general or constitutional affections which constitute the most urgent examples of what is called irritation.

In an investigation of this nature it would be well were it possible to dis-

* Vide recent papers in this journal on "Irritation," "Cold," and "Heat."

tinguish very precisely between the local irritation and the general; and between that share of action which is more healthful and that which is most strictly morbid but for the present it must suffice if we can only shew that these distinctions actually exist, and are sometimes discoverable, and that the fact is essential in determining the treatment of all cases.

In a former account of general laws in medicine, we endeavoured to establish, as a fundamental principle, that health consists in a due balance of the functions of the body, and we offered the subjoined plan of the animal economy as a starting-point for subsequent studies.

PLANS OF THE ANIMAL FUNCTIONS,

Between all and every two of which some sort of equiponderance is necessary.

NERVOUS FUNCTIONS.—MOTION, &c.
ASSIMILATIONS. NUTRITIONS. EXCRETIONS.
CIRCULATIONS.

INGESTA. { Food, Fluids. Air, &c.

For the growth and nutrition of { Bone, Joints, Muscles, Nerves, &c. Parenchyma, Membrane, Tubes, &c. } Producing deterioration and loss, requiring renewal and elimination. Effects increased by exercise or use, and vice versâ.

EGESTA. { By skin, mucous membranes, lungs, liver, pancreas, kidneys, genital organs, &c.

CIRCULATORY BALANCE.

The Blood.

Absorbent system—the glands and other organs of perfective assimilation — thymus, thyroid, spleen, liver, &c. { Veins and the right heart. Left heart and arteries. Pulmonary and general capillaries.

BALANCE OF THE NERVOUS CIRCULATION.

Perception. Reaction.

Voluntary, and involuntary systems, communicating

Organs of sense,
Nerves of conduction,
Centres of appreciation or sense,
Nerves of volition,
Organs of motion, &c.

Local disease may commence in any one function of the body.

We adverted at the same time* to the existence of heathful oscillations in most functions; to the importance of correlative acts and compensations, whether of increased activity as in plethora, or retarded operations as in periods of abstinence, or when one operation supplies the deficiency of another.

We spoke, too, of the natural order in which the functions become accelerated or decline—as from the influence of the mind, food, seasons, or exposure. We stated that disease is a disturbance of the natural balance in the form of local, combined, or general affections; that the course of the disturbance in any given case is strictly in proportion to the cause.

As a less general law we shewed that there is mostly in disease a tendency to spontaneous recovery, and that variability is a peculiar and sufficiently common character, and of great importance in practice.†

We have professed to regard it as an error to attend especially to any element of the body as the only fountain of disorder or source of remedial actions, but, as it will be admitted that some organs in particular must be more extensive and important in their actions than the rest, and as it is absolutely necessary to make separate studies of them, we shall not here seek to excuse a preference for the subject of the blood and the capillaries as before all others deserving of consideration.

The following seems to point, if not very correctly, at least with no little justice, to opinions which doubtless have never been obsolete since their ancient birth.

"Upon the whole, however, we cannot but regard the blood as in many respects the most important fluid of the animal machine: from it all the solids are derived and nourished, and all the other fluids are secreted; and it is hence the basis or common pabulum of every part. And as it is the source of general health, so it is also of general disease. In inflammation it takes a considerable share, and evinces a peculiar appearance. The miasms of fevers and exanthems are harmless to

* Vide First General Laws or Fundamental Doctrines of Medicine and Surgery, addressed to Students and Junior Practitioners, by T. W. King. London, 1840.

† See also, a Paper on Variable Disorders, Guy's Hospital Reports, 1840.

every other part of the system, and only become mischievous when they reach the blood: and emetic tartar, when introduced into the jugular vein, will vomit in one or two minutes, although it might require, perhaps, half an hour if thrown into the stomach, and in fact does not vomit till it has reached the circulation. And the like is true of opium, jalap, and most of the poisons, animal, mineral, and vegetable. If imperfectly elaborated, or with a disproportion of some of its constituent principles to the rest, the whole system partakes of the evil, and a dysthesis or morbid habit is the certain consequence; whence tabes, atrophy, scurvy, and various species of gangrene. And if it become once impregnated with a peculiar taint, it is wonderful to remark the tenacity with which it retains it, though often in a state of dormancy or inactivity, for years or even entire generations. For as every germ and fibre of every other part is formed and regenerated from the blood, there is no other part of the system that we can so well look to as the seat of such taints, or the predisposing cause of the disorders I am now alluding to; often corporeal, as gout, struma, phthisis; sometimes mental, as madness, and occasionally both, as cretinism."*

A great and summary argument for humoralism in physiology is the following:—

In the chest the heart is for the circulation of the blood, and the lungs for its purification. In the abdomen the digestive organs are for the formation and renovation of the same, and the great secreting organs are mainly for the depuration of the blood. In other systems we find nerves, bones, and muscles, freely devoted to the functions of digestion, respiration, and excretion. Now all this is designed to meet the waste, loss, and deterioration, which the daily and material support of all parts requires from the blood, which by nourishing or repairing all (through the medium of the capillary vessels) becomes deteriorated; fitted for excretion; and in want of additional assimulations. Are not all the organs here adverted to humoral in their uses? We see mechanical tubes only for humoral supplies! Is not almost every disturbance tantamount to some defect or deterioration of the great compound "humor"—the blood?

The blood is liable to a great variety of alterations both in its quantity and quality, and upon these all the material molecular or capillary changes of the body are mainly dependent, whether of growth, nutrition, reparation, or morbid action.

It would be well for the student to supply himself with a complete analysis of the facts advanced by the investigators of the blood in health and disease. We shall produce but few of these, for without any disposition to distrust or disparage the statements in question, it may fairly be said that the truths are too few and isolated as bases of the general conclusions which we conceive may be justly asserted, if not amply defined. Without rejecting any truths, it is proposed to follow a more free and open course, which we feel confident the common facts from the bed-side and necroscopy will fully justify.

The uncertain and imperfect state of chemical and microscopic knowledge may be allowed as yet to form but comparatively feeble data, with respect to the vital agencies of the animal fluids, yet almost everything seems to depend ultimately on the advance of this knowledge. After Hunter, the labours of Babington, Magendie, Andral, and numerous others, offer essential truths to the physician.

The tables already quoted above indicate an opinion which in lecture we have occasionally dwelt upon at some length, under the terms maturative and perfective assimilations. One organ is said to possess arteries and veins, and of course it produces particular changes, according to its texture in the blood nourishing it. Various other organs have in addition efferent lymphatics. Another set have besides, vasa inferentia. We take the liberty to state *en passant*, that we admit no peculiar function of absorption or modelling with reference to the so-called absorbents, and that these tubes are chiefly specific in the nature of their contents and arrangements for a more rapid circulation than the veins.

The idea of perfective assimilation may be very simply illustrated as well as corroborated by reference to the numerous absorbent glands abounding in the bodies of mammalia. These

* Mason Good's Study of Medicine, 1822, Vol. 2, p. 34.

vascular appendages of the lymphatic system are surely destined only to alter or mature the fluids they transmit; whether it be the blood, the serum, or the chyle, and whether it be during health, or in the acts of ulceration, inflammation, or poison from without or from within. Chemistry or anatomy may farther unfold the present physiological statement, but it is already clear that with an active organization here are little bodies abounding and transmitting by numerous capillaries both lymph and blood for specific purposes, and that in no part of our bodies are the absorbents seen to reach the sanguineous current, but through these laboratories. If we presume* a venous absorption in the stomach and bowels, may we not impute a correspondent elaborating action to the liver, and in one sense compare its two sets of veins to the inferent and efferent vessels of a conglobate gland? And when we arrange together the absorbed fluids of digestion, all those of the excretory glands, passages, and surfaces, those of the serous cavities, and of the solid parts, whose supplies seem only for their proper growth or nourishment; and lastly those of morbid or reparative processes; do we not perceive the necessity for admitting a general doctrine of dilutions and maturation—something which we may regard as a more complete working up of the animal materials, and which we may venture to call perfective assimilation?

Chemistry may one day help us to determine that the lymphatics of the excretory organs are so many sets of conduits for peculiar and important fluids of assimilation, and not merely for common aqueous fluid.

There is an observation connected with the termination of the thoracic duct which deserves a remark. It is, that the branches of the superior cava have manifestly a more ready circulation than those of the inferior, both on account of the influence of gravity and a more accurate arrangement of valves about the neck. Inspiration also modifies the thoracic currents. In relation to the lymphatic circulation in fœtal life, the contents of the superior cava having a more or less strictly prescribed course through the right side of the heart, it will be perceived that the lymphatic products make their way most directly to the placenta during uterine existence, as they do to the respiratory organs in after periods.*

We have before endeavoured to introduce the idea of perfective assimilation—see papers in the Guy's Hospital Reports, on the use of the thyroid body, and on the rapidity of the lymphatic currents. From the first paper the following is transcribed.

"*All living organs receive supplies of the circulating fluids, calculated to maintain their growth or secerning functions; and, in particular cases, other additional ingredients form essential parts of the materials on which the organs are destined to operate. Now, we find that the circulating fluids, with or without these superadded ingredients, are submitted to the actions of various organs, and to as many different modes of operation, each for its peculiar results.*

"These materials, these actions, and these results, may, for our present purpose, be arranged as follows. (See top of next page.)

"This comparative view of the influence of organs upon the fluids is very incomplete; but it may perhaps strike some as the diagram of an important physiological survey.

"The nervous system, which might form a distinct plan, has been excluded for the present, in order to simplify the view."

With respect to the thyroid gland, we must consider that its specific secretion passing off by the lymphatics is demonstrated. The vascular supply and muscular compressions of this gland deserve notice.

The supra renal bodies may appear less admissible as organs of assimilation. The size of each body in the fœtus, the very abundant distribution of arteries over its surface, the radiated structure of its external or cortical layer, and the large and beautifully ramified veins throughout its internal vascular layer, all conspire to indicate that a supra renal gland has an active and important destiny to fill. Its constancy†, both in infancy and after life, seem to attest that it is an essential organ. The little vascularity which is found in its outer substance so uniformly is only analogous to the appear-

* The mere change of arterial blood to venous, if this were all, is absorption.

* Mr. E. Cock made this reflection to me at the time of the publication of Sir. A. Cooper's work on the thymus gland.

† Amidst abundant opportunities, we have been looking at these glands for years, and have never missed them in man, or in the animals which

ORGANS	RECEIVE	AND YIELD.
The brain, or parts of it, and perhaps other parts . .	Blood *arterial* .	Blood *venous*.
Bones, muscles, and appendages; coats of vessels; spleen; thyroid and thymus glands, and capsulæ renales	Blood *arterial* .	Blood *venous* and lymph (*in lymphatics*).
Cellular and serous membranes	Blood *arterial* .	Blood *venous* and lymph (*in lymphatics*) first deposited for a time.
Kidneys, pancreas, lachrymal and salivary glands, and mucous surfaces . .	Blood *arterial* .	Blood *venous*, lymph (*in lymphatics*), and excretory fluid.
Skin, and some mucous surfaces	Blood *arterial*, air, &c. . . .	Blood *venous*, lymph (*in lymphatics*), and, in addition, extraneous matters are absorbed. There is also excretory fluid.
Lymphatic and lacteal glands	Blood *arterial* and lymph . .	Blood *venous* and lymph (as a general term).
Liver	Blood *arterial and compound venous* . . .	Blood *venous*, lymph, and an excretory fluid.
Stomach	Blood *arterial* and ingesta . .	Blood *venous* (fluids absorbed by the veins), lymph, and excretions.
Villous small intestines . .	Blood *arterial* and chyme with secretions . .	Blood *venous*, chyle (in lacteals), and excretions.
Colon	Blood *arterial* and fæces . .	Blood *venous*, colic fluids, &c. (in lymphatics, and perhaps veins), and excretions.
Lungs	Blood *venous of all kinds*, chyle, lymph, and pure air	Blood *arterial*, lymph, mephitic air, and water.

ance of paler parts, whose activity we are well assured of, as a periodical circumstance, which it may be important to remember: indeed, the comparative difficulty of injecting its numerous superficial arteries is very analogous to what we experience in the salivary glands, and other parts subject to periods of repose.

The alternations of excitement and relaxation, which are common to all parts in different degrees, are, in certain cases, most complete, particularly after birth, or when the fulness and wide intervals of our meals, &c. demand and insure the marked periodicity of innumerable functions.

The proportionate size of the part in question is, doubtless, greater in the fœtus than in the adult, although it is, we think, quite certain that the organ increases after birth, and remains beyond the middle period of life much larger than it is commonly found in infancy; and also that its subsequent decline is in no respect more marked than that of any other gland.

When we speak of the spleen as having a function analogous to that of the preceding organs, and entitling it to be classed with them, we would by no means exclude the idea even of a more important office being performed

possess them. It has, we believe, recently been attempted to prove that the venous blood of the supra renal bodies is peculiar even in the adult. We confess, however, to having sometimes regarded the body as a mere atrophied organ, especially in later life. Its persistence, without any use, might be attributed to venous distension within from its peculiar location. After dissection we found the two supra renal bodies weighed in a fœtus near term, dr. j.—sc. ij.; boy, æt. 3 months, sc. jss.; girl, 7 years, dr. ij.; female, 24 years, dr. iij.; male, 43 years, dr. iij.; do. 55 years, dr. ij.—sc. ij.; old female, dr. ijss.; oldish man, dr. ij.

by it; but allowing a fair share of importance to its numerous lymphatics, and their necessary activity, may reasonably require us to admit, in some degree, either an improving or deteriorating influence as one action of the organ. The simple fact, that the veins of the spleen join those of the porta, affords us good ground for concluding that its blood is important to the function of the liver. The proper structure of the spleen, as it is developed in man and different animals, is reticular and elastic, though in various and regular gradations, as I think our museums at Guy's can in part testify; and it will, perhaps, now be scarcely disputed by any one, that varying states of distension are proper to the organ.

We need scarcely say that this function of perfective assimilation has been too little, or erroneously, regarded, if it should only appear to be proved that we know as much of the organs in question as of the ordinary secerning glands, excepting perhaps some detached points of their chemical history. It will still remain to be regretted that so little is understood of all. If any one were inquired of as to the design of the spleen, the absorbent glands, the thymus, the thyroid, or of the supra renal bodies, does it not appear that the most certain and general, and important answer, should relate to the changes which each of these parts produces upon the fluids circulated through their tissues, regarding equally the sanguineous and absorbent vessels?*

With a varied organization, and more than abundant nutritive supplies, and with large and numerous absorbent vessels, we cannot doubt that humoral changes, and of an eliminative character, are essential objects. Many may, indeed, hesitate to regard these as the first, or very important, ends proposed; but it must be admitted that they are marked and constant effects of the structures under consideration. For our own part, it seems difficult to suppose the main office of all these parts is not one of a maturing as well as eliminative kind; in fact, a *function of perfective assimilation.*

The fluids of the vesiculæ seminales, &c., as they seem capable of being absorbed, present curious matter for consideration; indeed, it may be that the evolution of these secretions, and their subsequent transmission into the circulation, are as necessary to the vigour of many organs as the excessive loss of them is prejudicial to strength. Common experience seems to indicate this. May it not also be, that many modifications of syphilis, as well as of marasmus, should be more particularly regarded in this light than they have hitherto been? It requires also to be remembered, that as warmth, a sore, or the normal uterine functions, may be conducive to the free developments of health, so the due performance of the male function may facilitate healthy actions. The idea of nervous exhaustion may be admitted (should it not be sudden?) but it is not to be supposed that this idea explains all the debility which tardily follows excess. Leucorrhœa is humoral loss and deterioration, and not merely nervous irritation.

Much has been thought of the influence of the cerebellum on the generative functions, but in them, for our part, we see chiefly humoral circumstances in operation. Languor and wasting (animal triste) follow excesses. Gradually the material supplies are allowed to accumulate, and vigour and desire are renewed. Ejaculation seems only equal to defæcation or parturition. The evolution and secretion of the generative organs seem essential to mature the materials and form of the rest of the body.

With wasting diseases, the genital organs become quiescent, or permanently decline. With full nutrition they grow active, and excite the mind as if the blood knew not where to get out: and this is a figure of more than theoretical importance. With moderate diet, and determination of mind and effort to other functions, the reproductive may remain tranquil.

In the case of one individual, fair and little pilous, at the period of convalescence following suppurating tonsils, we have very many times noticed the beard stronger and darker for four or five days; but this phenomenon has failed to take place if the recovery was interrupted, and we never found the event occur under any other circumstance. The numerous periodic and

* The oscillation, or varying activity, of these changes, as well as the opinion of a reservoir principle, requires attention; but this would be more appropriate in the examination of particular functions. See the account of the thyroid gland, before referred to.

successive changes in animals relative to generation cannot but be in a great measure humoral. To restrict the cerebellum to a confined periodic action does not seem justified by facts, and sexual imperfections have not been found to involve defects in the cerebellum of animals, notwithstanding the assertions of Gall. In fine, a common analysis of the animal processes requires that humoral, nervous, and physical causes be taken into the account at every turn. Doubtless some courage depends on judgment, but does not much depend on vigour, repletion, skill, and sense, or instinct of ability? With a firm circulation the face can hardy blush or blanch; without it, the knees may tremble, though the mind is clear, if not calm. These are not less humoral than nervous changes. Fear paralyses the muscles, the veins lack support, and the heart blood. The valour of a drunkard, a fowl, or a lion, are periodic, and not merely cerebral. The last, with repletion, and no safety-valve, is the greatest coward and cripple of the three.

It may be excusable to remark, that a little mass of corroborative illustrations to our present view is to be met with in several of our former papers. We are well assured, also, that pointed remarks of a like tendency are to be found scattered amongst other works. Perhaps even if the reflections of those who observe were as freely known as the views of compilers and self-constituted critics, the occasion is passed for advocating humoralism except in the way of defining and extending it. It might engage a considerable chapter to review the several effects of exercise. Muscle, joint, bone, secretory organ, nervous and circulatory functions, consume and deteriorate blood, and so react on each other. After eight hours' march with a gun, one throws himself down to rest for an hour, and rises refreshed. Excretions, absorptions, and reparations, have been busy. Without fresh food, or with only the concluding digestion of a preceding meal, balance is restored between the vessels of exhausted parts and the reserves of nourishment, as in the vertebræ and various tissues. The surface is quiescent, the muscles brace the vessels; these with the heart adapt themselves to the reduced mass of blood, and capillary activity is confined to the most weakened parts, as of necessity. Thus repair destroys the necessity of repair. It is said, "the smaller arteries have a distributive power according to the wants of a part, and that circulation is active according to the changes which the blood effects on the part." (Brit. and For. Quart. Rev. 1839). We think this incorrect. Capillaries and all living tissues have an assimilating power which bears some proportion to their wants, but their nutrition, like secretion and inflammation, depends much on the blood supplied to them. "Inflammation," says the same reviewer, "is often only a disturbed state of parts tending to resolution," but this is like darkness, which tends to light. If not pure reparation, there is disease, and this is not arrested till the blood is changed. The revolutions humoral are like the hours of the day.

Exercise is to be very cautiously enjoined in opposition to the sense of lassitude. If the nutrient materials of muscle are deficient in the system, little effort can be endured with safety, and little is required to induce all the nutritive deposit that the body can spare to the muscles. Exercise becomes exertion, and the feeble muscles, made more feeble, too soon consume their poor supplies. This view applies to all tissues individually and separately, and is involved in the explanation of every disorganization.

From what has been said already, as from what follows, there is reason to conclude that for the most part, in vital actions, the blood and the capillary being necessary to each other, and to the containing tissues, they must be regarded as one organ. And as all the changes which result depend, for the most part, on the state of the blood, whether for health, or disease, or reparation, we do not scruple to speak of the functions in question under the name of humoral.

Poisons, remedies, or victuals, having entered the blood, it is in the capillaries that their ordinary effects are to be sought for, and whatever their extraordinary effects may be we shall not now inquire. As the properties of different parts of the body are peculiar, so must their nutrition be of distinct kinds; and in the same way we should expect to find the several tissues variously affected by the capillary permeation of particular matters.

It is not easy to speak too strongly of the importance of the capillary system. One great starting-point of the humoral pathology is doubtless this—that the capillaries are essentially dependent on the blood for their health, as well as even for their primitive existence, and all their occasional redevelopments. Thus we are again impressed with the necessity of weighing the peculiarities of the blood. As to the connexion of the capillary functions with nervous influence, it is a matter which we do not intend to dispute, but still would rather regard it as most intelligible when other topics have been fairly appreciated.

We deem it necessary to observe, that innumerable, active, and universal as the capillaries are, they may be found every where in a nearly equal state at the same time; and that not only must there be a certain correspondence of activity between the whole and the heart, but also some kind of balance must be maintained between the capillaries of different parts; as, for instance, between those of the surface and of the anterior, or those of the lungs and bowels, or of the skin and kidneys. Here we perceive sometimes commensurate actions, and sometimes compensatory ones. Again, we may see, as it were, three parties concerned in reference to the natural balance of actions, for whilst cold obstructs the functions of the skin, and the heart itself is in consequence temporarily impeded, the circulation in the deeper organs becomes augmented, and ultimately the heart reacting on the impediment, its force adds further to the deeper actions, supposing the superficial to remain obstructed. Still this is but a simple case of physiological correlation, in comparison of the complicated relations which render innumerable parts more or less dependent on each other for an easy or natural share of the influence of the circulation. We must conclude, that the capillaries (as well as is their blood) are in a great measure maintained in health, or driven to disease, by the humoral results of digestion and absorption, maturative and perfective assimilations, and of excretion. Heat and cold have their agency; light and electricity may have theirs. Mental disturbance, and physical violence, are other sources of disturbance which still in part affect the blood humorally.

The place for the appropriate consideration of intimate material changes in the substance of any organ, may be determined to be amongst the capillary changes, or, in other words, amongst the instances of disturbance in the capillary balance; and this whether the changes relate to nutrition, inflammation, reparation of injury, or specific affections. May we not safely speak of the capillaries, with their blood, as the most important, if not the sole, agents in these processes?

One or two reflections on arteries generally may not be deemed out of place.

When an artery transmits blood with unwonted facility, as when the part it supplies is suddenly active, or growing, or inflamed, we may presume the first effect in the vessel to be contraction; for the vis a tergo remaining the same, the facility of the ulterior circulation is greater and the distension less. Now, the contraction of an artery will diminish its own nourishment and render it feeble, and then it must dilate. Its nourishment now, again, is increased, and it is ready to resume its pristine calibre. But if the above be just, there will be a succession of dilatations, &c., until there is an equal balance between the general arterial distension, the action of the artery in question, and the capillary action which it has been preserved to maintain—suppose the growth of a tumor, or of a stag's horn.

Let us also remember, the artery of an *inflamed* part has not a healthy nutrition. Let us next suppose the local action arrested, or even declining, the activity of the capilaries is failing, and the arteries cannot so readily empty themselves; their distension is still not greater than that of the whole arterial system. Where shall we look for the cause of their decline or contraction? Their nourishment has been sufficient only, but we shall find local actions set up elsewhere. Arteries contract with hæmorrhage, and subsequently dilate through defect of nourishment. The larger arteries of the gravid uterus, as of many inflamed parts, may still be weak through scanty or defective nutrition. The febrile state is defective nutrition, and most evidently what is called asthenic inflammation. We hold all inflammation (not reparation) to be defective nutrition.

"One of the most interesting facts established by the hæmodynamometer is

the uniform amount of pressure exerted by the blood upon the coats of the arteries in every part of the body; those in the immediate vicinity of the heart being distended by an equal force with those the most remote from it. M. Poiseuille made the experiment on the carotid, and on the muscular branch of the thigh of a horse, and notwithstanding the very great dissimilarity in the diameter and distance from the heart of the two tubes, the displacement of the mercury was exactly the same in both*." Arteries are made thick by the column distending them, and become thin, as on the head, where they have little to resist within.

This equality of pressure throughout the entire arterial system† is, observes Magendie, an extremely important fact, in a practical point of view. It shows that if the practitioner desire to lessen the quantity of fluid in circulation, it is of little consequence what vessel he opens; for the equilibrium of pressure is simultaneously re-established in all the vascular tubes.—(Lect. 6.)

M. Magendie considers the heart the efficient organ of capillary impulsion. In a paper on the "Safety-Valve Function of the Heart," we have shown by the venous sphygmometer, as well as by a variety of facts and arguments, that in the main the arterial impulse suffices to propel the blood beyond the capillary system.—(Guy's Hosp. Rep. p. 837.)

It will be our next object to show that the foregoing considerations are essential to the study of inflammation and fever, and even of struma and cancer.

36, Bedford Square.

ON THE EDUCATION OF ARMY SURGEONS,

IN A LETTER TO

SIR JAMES M'GRIGOR, Bart.
Director General of the Medical Department of the Army.

Sir,

Sir George Ballingall has lately addressed a letter to the Right Hon. Sir Robert Peel on the subject of the education of the medical officers of the public service, in which he recommends that a chair of military surgery should be established in London and Dublin, such as now exists in the University of Edinburgh.

The worthy knight's zeal for the benefit of that department of the public service over which you have so long and so honourably presided, has led him to conclude that the endowment of these chairs is to remove a difficulty, under which it is well known that the medical department of the army at present suffers. But, with all deference to the excellent authority of so able a professor, I must be permitted to state, that if what is called "military medicine" is to be taught as a separate branch any where in Great Britain, it can no where be so well learned as in that school which you founded, and which your exertions have raised to a degree of eminence, which renders it the most suitable place where military surgery can be taught in this country.

The museum of the medical department of the army at Fort Pitt, Chatham, contains morbid specimens of diseases, numerous and many, taken from the bodies of those who have fallen victims "to the diseases to which soldiers are liable," and collected from every corner of the British empire. And many of these preparations of morbid anatomy are further illustrated by drawings, casts, and paintings, while all are accompanied by every particular of the disease of which the patients died. What other school can be wanted? Where else are we to find such means for teaching?

But the school wants a teacher! And this is the more surprising, since there are so many in the army who could fill the appointment with so much honour to themselves, and so much benefit to the service, and that, too, without drawing an additional penny from the already overburdened finances of the country.

Chatham, constituted as it is at present, with its General Hospital for the invalids of the army, its large garrison of troops, and its museum and library, is the only place where a young man can be properly initiated into the nature of the duties of a military surgeon. Whatever we see makes a deeper and more lasting impression on our minds than what we hear; and a course of lectures unaided by those practical resources, which Chatham possesses,

* Vide an account of Magendie's Lectures on the Blood, in Dr. Hay's American Journal of Medical Science, November, 1839.

† It is not to be forgotten that gravity gives different degrees of pressure to various parts of the circulating columnal mass.

must be, at the best, but of doubtful benefit. "Anatomy and chemistry," said the illustrious Sir Charles Bell, "require demonstration. They are, therefore, the most essential sciences to be taught by lecture, in all colleges of medical instruction. The practice of medicine and surgery requires to be taught by the bed-side of the patient. But without saying that elementary courses on medicine and surgery are useless, *yet they are those which may be supplied by diligent reading.*"

That the want of a lecturer on morbid anatomy and operative surgery at the General Hospital, Fort Pitt, is much felt, I can well bear testimony to, for it was my fortune, during the time I was stationed there, to become acquainted with the sentiments of a great many of the department on this subject, and I never knew any other opinion to prevail. He should likewise be curator of the museum, and, in addition to this, his duties should consist in pointing out, in the form of lectures, the beauties of the museum, and in both demonstrating the various operations of surgery on the dead body, and in seeing the young men perform them. By this plan, the assistant-surgeons, before proceeding to join their regiments, would be made thoroughly acquainted with what the museum contained, and they would be, therefore, better enabled to add to its greatness; they could scarcely fail to become excellent anatomists, pathologists, and operative surgeons; and having arrived thus far, they would only then require practice to make them accomplished medical officers.

The young men, by being called upon to perform on the dead body the different operations in surgery, in the presence of others, and under the guidance of one appointed for such a duty, would readily attain to a proper knowledge of a department of the profession always important among the qualifications of an army surgeon; and they would be enabled to proceed to their respective posts with a degree of confidence in themselves, which, it may be safely alleged, is not common for them, under existing circumstances, to do.

The museum of morbid anatomy has now arrived at that degree of excellence and magnitude, that it can no longer, with the prospect of much good, be under the immediate care of one not properly qualified for the task. For it may be said with much truth, that it will take an accomplished anatomist a good many months before he knows well what it contains, and it will occupy a much longer portion of his time, before he can either prove of any particular service to it, or to those who have to seek for information from it.

Candidates for appointments to the medical department of the army should be required to proceed to Chatham, before being examined at the Army Medical Board, as is the present custom; when, after undergoing a sufficient course of instruction there—its duration depending altogether on their previous acquirements—they should be publicly examined, *i. e.*, they should be examined in the presence of the other candidates, by the principal medical officer and the staff surgeons. If the candidate acquits himself creditably at this trial, he might then be ordered to appear before the Medical Board for final approval.

This examination at Chatham ought to be purely practical, and regularly searching. Either in the wards of the General Hospital, or in those of the Provisional Battalion Hospital, the candidate ought to be made to examine into the case of any patient pointed out, and at once, and in the presence of the examinators, be required to name the disease under which he suffered, to mention its peculiarities, and to state how he distinguished it from other diseases; and subsequently, aside from the patient, he ought to be required to give the general history of the disease, its various terminations, and what was likely to be its course in the case in question. The candidate ought likewise to be called upon to perform the different operations in surgery on the dead body, in the presence of the examining medical officers; and, at the same time, he ought to be required to describe the readiest and best method of performing a post-mortem examination. And lastly, he ought to be required to point out in the museum specimens of the different disorganizations of structure likely to be produced, provided a fatal termination was the result, by the different diseases he had been called upon to describe.

This examination being conducted in the presence of the other candidates has much to recommend it, and little

against it. All will be benefitted by such a course of proceeding, and the candidate, if found wanting, will be in a position which he will find to be approved of even by his companions. The odium of rejection will be entirely on his own shoulders; his spirit must be roused to better deeds, if he has any; and on being again put at the bottom of the list of candidates, or merely remanded for a certain time, whichever may be judged most right, he will be unable to solace himself with the delusive idea that he has been unfairly dealt with, or that he has been put back in order to make way for one of greater interest. I say he will be unable to do this, because I take it for granted that there will always be that discrimination among his fellow candidates, that spirit of fair play and sincerity of purpose, which, together with their knowledge of the very subjects on which he foundered, will lead them to approve of the conduct of his judges, and, with manly dignity, to assert their sense of the propriety of the sentence. If, on the contrary, he be approved of, he has then reason to rejoice that he was thus publicly tried. He cannot but feel proud to look his fellow candidates in the face, and, with becoming modesty, to extort from them, whether willing or not, his just claim to their congratulations and respect.

A public examination, thus conducted, has likewise its good effects upon the examinators; it compels them to enlarge their field of examination, and to increase their store of knowledge; and it obliges them to act with all honesty and uprightness of purpose.

By the present regulations of the Army Medical Board, candidates for appointments in the service are not only required to possess the diploma of either the Royal College of Surgeons of London, Edinburgh, or Dublin, but they are likewise called upon to produce certificates of having attended several courses of instruction not included in the list of qualifications demanded by these bodies for the granting of their license. Candidates for the medical department of the Army are often, in consequence, at great additional expense and inconvenience, necessitated to again repair to some medical school for the purpose of obtaining these extra certificates, and they are subsequently required to pass a certain probationary period at Chatham before being commissioned.

It is firmly believed by the writer of this letter, that if gentlemen possessing the diploma of either of the Colleges specified, were, in consequence of it alone, to be considered eligible for appointments in the service, and were only required, in addition, to undergo the course of instruction and examination herein mentioned, they would be saved both much time and expense, and the character of the army medical officer, as a surgeon, in every respect bettered. I assert this much, because, no where in Britain, can the candidate be better able to render himself excellent in pathological anatomy and operative surgery than at Chatham; and all, who are acquainted with what constitutes superiority in our profession, will at once allow that, these being taught in the practical manner which the establishment at Fort Pitt admits of, few courses could be better calculated to render them eminently useful in their profession.

Besides, were such a course of instruction once instituted, the benefit to candidates entering the service would not be the only good derived. Officers, who had been for a long time abroad, on again arriving in this country, would hail with much satisfaction the ability to renew their knowledge in an establishment of their own, and with the assistance of one whose chief interest it would be to attend to theirs. Therefore, the more effectually to carry this plan into execution, and the better to render it worth one's trouble and acceptance, a well-qualified young man would require to be promoted for the purpose. He might be gazetted, Assistant-Surgeon Thomas Pitt, from the 100th Regiment of Foot, to be a Staff-Surgeon of the second class, and Lecturer to the General Hospital at Chatham*.

Manifold would be the advantages which would accrue both to the department and the service, by the appoint-

* I do not mean that, although promoted for this purpose, he is not to do the usual duty of a staff-surgeon. On the contrary, the teaching and looking after the museum should be in addition to his other duties. In civil life, surgeons both lecture and toil from morn to night; and army surgeons are as fit, and just as willing, to do the same, provided only that they are encouraged. Early promotion would be good encouragement, and the duty required would not be great.

ment of such an officer; for, after a few years' creditable service in such a situation, he ought to be considered as possessing strong claims for further preferment. The talents which recommended him for this, his first step in the ladder of promotion, ought, during his career as a teacher, to be so much improved by the peculiar advantages of his station, that he could scarcely fail to prove an ornament to the department to which he belonged, and to reflect a lustre on its members generally. Moreover, the prospect of being thought eligible for such an important post, would always have its due influence with many: it would encourage them to keep up their knowledge, and to look forward with a lively hope to such an honourable stepping-stone to further advancement. Officers of a high order of merit and acquirements would thus be ensured to the department: in course of time they would multiply, and spread themselves abroad among the different divisions of the army; and they would do a credit to our profession, and confer benefits on our fellow-creatures, not easily to be described.

I have thus advocated the appointment of a youngish man to the more slavish duty of the museum and anatomical rooms, for the double purpose of affording encouragement to the assistant-surgeons, and, in progress of time, of disseminating in the army generally a very superior style of surgeon—one, whose future elevated position would be won rather by the cockade *in* his head, than by the number of years he had worn one *upon* it. But although I have done this much, I am, nevertheless, of opinion, that the principal medical officer at Fort Pitt should likewise be able to teach, and be required to give, periodically, a lengthened course of instruction on the medical history of armies, on camps and on campaigns, and on all those peculiar duties which occasionally fall to the lot of the army surgeon. Length of service, and the practical knowledge thereby attained, ought to qualify him well for the performance of such a duty.

Two such courses of instruction combined, as those I have pointed out, ought to be more valuable to the younger medical officers of the army than a mere course of lectures on military surgery. And that some such additional course of instruction is required, may be admitted from this fact, that young surgeons, in consequence of the number of studies to which they have to apply themselves in order to obtain their diplomas, are too often found, just after passing the College, to have received a "mouthful" of much that is good, but not a "bellyful" of that which is most useful; therefore, in order to make them superior as surgeons, this "bellyful" of the really useful ought to be afforded them; and as this can be well and most effectually done by the adoption of some such plan as this I have proposed, it ought not to be withheld. However, young surgeons must themselves work, and on no account forget those beautiful lines of Horace,—

"Qui cupit optatam cursu contingere metam,
Multa tulit fecitque puer."

"The youth, who hopes the Olympic prize to gain,
All arts must try, and every toil sustain."
FRANCIS.

I have the honour to be, sir,
Your most obedient servant,
FRANCIS CALDER,
Assistant-Surgeon 2d Life Guards.

SPASM OF THE GLOTTIS.

To the Editor of the Medical Gazette

SIR,

DURING a visit which I lately made to Brighton, I was called by a family residing in Brunswick Terrace, to the following case, and as it presents a peculiar modification of a prevailing epidemic with hysteria, perhaps the details may not prove uninteresting to your readers.

One night, about eleven o'clock, as Mr. G——, the master of the family, was retiring to rest, he heard, on passing the room of one of the female servants, a peculiar sound, resembling the sonorous clangor of croup. On visiting the patient, almost immediately afterwards, I found her in great distress, breathing laboriously, and the spasmodic action in the throat was so urgent as almost to threaten immediate suffocation. She threw herself wildly about the bed, complained of pain in the head, and her eyes were suffused and injected by the impeded respiration.

It appeared that the paroxysm had seized her during sleep, and had continued some time before she was

awakened by a sensation of choking. The pulse was rather full and bounding, which might, I think, be ascribed to her alarm, and the efforts she made to draw her breath; and her bowels had been for some days somewhat constipated. She was placed under repeated doses of the compound ipecacuanha powder with calomel, and a draught with æther, camphor, and other antispasmodics, which afforded speedy relief; and in a few days she so far recovered as to be able to attend to her duties as upper nures.

What may be termed *idiopathic* spasm of the glottis, in adults, is a disorder of rare occurrence, but several cases are recorded of fatal spasm resulting from irritating causes in the neighbourhood of the larynx: these arose from impacted food, and acute laryngitis, producing spasmodic action of the glottis, not inflammation, for no inflammatory action could be traced as having extended to the part.

From the previous history of this girl, I learnt that she was of a highly *mobile* temperament, easily wrought upon by accidental circumstances of the moment, and that she had suffered from frequent attacks of hysteria, and, in fact, attacks of the same nature as the present one, though of less violent a description. Had I not known this, and had the disorder been more tardy in its accession, I might probably not have hesitated, in so urgent a paroxysm, to pursue a different and more decided line of treatment. The event, however, justified the diagnosis, as the attack gradually yielded without depletory measures.

The exciting cause was ascribed by the patient to exposure upon the beach to a bleak north-easterly wind, which, in the latter days of October, prevailed at Brighton.—I am, sir,

Your obedient servant,
R. H. Allnatt, M.D.

Parliament Street, Whitehall,
Nov. 18, 1843.

DELIRIUM TREMENS.

To the Editor of the Medical Gazette.

Sir,

I enclose you the following case of delirium tremens, with some remarks on the disease, as to its nature and cause. Should you think them worthy of your notice, perhaps you will insert them in your valuable periodical.

I am, sir,
Your obedient servant,
William F. Soltan, B.M.
è Coll. Ball. Oxon.

24, George Street, Plymouth,
Nov. 7, 1843.

William H——, æt. 29, cellarman to a wine-merchant. General health reported to be good, with the exception that at times he has suffered from what his wife terms "bilious vomiting." Is said to be of *very temperate habits (?)* On Monday morning, Sept. 4, he awoke his wife at 2 A.M. telling her that "he felt very odd, but that he did not know what was the matter with him." He got up, however, as usual, at six, and went about his work, which he was soon obliged to relinquish, as an attack of diarrhœa came on, which at that time was very prevalent in this town. For this he put himself under medical treatment, and it was soon checked. On the Monday evening, however, whilst his medical attendant was visiting him, he was seized with a fit of an apoplectic nature, on recovering from which he was much confused, and was not at all conscious as to what had occurred. From the peculiarity of manner which he then evinced, it was conceived that these might be the premonitory symptoms of an attack of delirium tremens. It was not, however, until the following day that the case became so marked in its general character as no longer to admit of a doubt as to its nature. From the Monday, on which he was first taken, to the hour of his death, he had no sleep. In defiance of all the ordinary remedies, the symptoms were only aggravated, and on Thursday, at 10 P.M., I was sent for to see him in consultation, and found him in the following state.

There was great anxiety of countenance; the eyes were incessant in their movements, but there was not the slighest intolerance of light; the head was natural in its temperature; the tongue was moist, somewhat blanched and flabby; the pulse was 130, weak, small, and compressible; the skin was bathed in perspiration, over the whole surface of the body; there was nothing peculiar in its smell; the perspiration of the left side was cold and clammy, as were also the extremities; urine had been freely passed during the day;

the bowels had been open once. The patient at this time was out of bed, having partly dressed himself, and was very desirous of going to his work. There was a general tremor of the whole muscular system. The quickness with which he answered every word which he heard spoken, though not addressed to him, was quite characteristic. He at times imagined that he was occupied in lifting casks, and he would call upon his fellow servants by name, to be more energetic in their labours. In this way he continued for an hour, and it was with some difficulty he could be persuaded to remain in bed. During all this time he knew me, and those that were about him. He now fancied that customers were inquiring into the qualities of particular wines, and in his answers a thousand incoherent ideas were crossing his mind, disjointed and unconnected.

Throughout the whole progress of the disorder there was no attempt at violence, nor was any irritability displayed, with the exception of his resistance to any restraint which was imposed upon him. At half-past 11, the poor fellow became more laborious in his efforts. He imagined, though in bed, he had to lift some heavy weight, and his muscular efforts at this moment were most remarkable. They resembled more the spasm of an epileptic or convulsive fit. But with all this, the mind in its delirious state still kept pace. He continued in this condition for about two minutes, and then, with a faltering voice, and faint cheer of fancied success, he fell back exhausted on the pillow. From this moment he remained quiet, with the exception that he sang a verse from the Canadian boat-song. The sweat was as profuse as ever, and the tremor excessive. At length subsultus tendinum came on, the pulse became weaker, and at one o'clock, A M. just three hours after I first saw him, he breathed his last. During the whole of this time he pertinaciously refused all the remedies that were ordered for him, constantly declaring that he had had enough.

Such is the brief history of a case deeply interesting in every point of view. Here is a man, who every person believed to be *remarkably sober, because he was never known to be drunk,* and yet he is attacked with delirium tremens of the worst kind. On occasions such as these one is always ready and willing, if we can, to lean on the side of mercy and charity; but when it does so happen that every symptom is so well marked, and every characteristic of the disease so fully developed as to admit of but one conclusion, it then becomes our duty, however painful it may be, no longer to conceal the real nature of the disease.

Of all diseases to which mankind is subject, there perhaps is not to be found one more extraordinary in the nature and development of its symptoms, than delirium tremens. Who can read the phenomena detailed in the history of the case above given, and not reflect on the great mystery which hangs over this disorder? What, I would ask, are the most prominent features of delirium tremens? Great excitability, with depressed vitality. In the case before us the pulse was weak and flagging, and yet the muscular system did not seem to sympathize in the depressed power of the heart's action. Again, here is a man who, an hour before his death, is apparently full of energy and strength; but like the flame which blazes for the minute, then suddenly falling and flickering for a few moments, expires, he is a corpse before us, ere we can realize the danger of his position. Why, then, have we death here, or what is it that so rapidly extinguishes life? Surely these are questions which it would be well for us if we could satisfactorily answer. Will examination after death solve the difficulty? Let the morbid anatomist and pathologist reply in the affirmative, if he can. In all *post-mortems* that I have ever seen of persons who have thus died, no morbid appearances have corresponded with the nature of the symptoms during life. But what is the condition of the blood in this disease, and what change has taken place in its elements? When symptoms become so general as those which herein occur, we must look for some general cause as giving rise to their phenomena, and what so probable as an altered quality of the blood? It will be allowed by all, that the effects of poison are accelerated or retarded, are severe or mild, according to the healthy or unhealthy condition of the system, or, in other words, according to its

vitality; and hence it is by blood-letting they are rendered more quick in their operation, and more marked in their effects, as by this process the vitality is lowered.

Delirium tremens is a disease of the whole system. Every nerve, every muscle, and every other texture of which the body is composed, is alike affected by its cause. It is a species of general convulsion, not confined to, or dependent on, a peculiar set of nerves or muscles. I believe that in this disease the poison of alcohol is exerting its influence on the economy; and that its cause does not depend, as is usually supposed, on the sudden withdrawal of the accustomed stimuli, so much as upon a peculiar condition of the system, which calls the hitherto latent powers of the accumulated poison into operation. To explain myself somewhat more fully, I will take the case of a man who is an habitual drinker, without being an habitual drunkard. If he be a secret tippler, he may continue his propensities, and never suffer from the slightest symptom of this disease perhaps for years. Why, then, has he been exempt? The vital powers of his system have been able to resist the noxious qualities of the poison. But let that vitality from any cause be lowered, and then see what will follow. All the effects of the accumulated drug will forthwith be developed in the symptoms of delirium tremens. Alcohol is doubtless in the system of the habitual dram-drinker; it is in his very blood, and more or less is carried by that blood into every organ through which it circulates. It is not, then, the mere subtraction of the stimuli that gives rise to this disease, for many are the instances which may be adduced, where the habitual dram-drinker, influenced by religious or other motives, has suddenly given up his wonted habits, and has gone directly from one extreme to the other. In such cases there has been no educating or tutoring the system for its new condition, and yet no evil consequences have resulted. Now, if this opinion as to the cause of delirium tremens be correct, namely, that it depends more upon a lowered vitality of the system than upon the withdrawal of the accustomed stimuli, I think it might somewhat affect the ordinary method of treatment which is adopted in this disorder, for if such be the case, it is the presence and not the absence of the alcohol which is telling upon the body; a distinction of no little importance. We may often recognize in the habitual drinker one or more symptoms analogous to those of the disease, though he continue for year after year, and never have any decided attack. Look, for example, at his trembling hands and his quivering voice, both of which are doubtless dependent on the same cause, and may be termed *tremor potantium sine delirio;* and though it does occasionally happen that the most notorious drunkard is exempt from them, yet whenever they are witnessed in those who are in health we may pretty accurately infer their cause. With these few remarks I shall for the present leave this interesting subject, with the intention of resuming its consideration at some future period.

ON IRRIGATION AND WATER-DRESSING

IN THE TREATMENT OF STUMPS AFTER AMPUTATION.

To the Editor of the Medical Gazette.

Sir,

Having read in the Medical Gazette of September last, a letter by Mr. Leach, on irrigation and water-dressing in the treatment of stumps after amputation, I beg to refer to my cases published in the Gazette of June, 1842. In the second and third the treatment was water-dressing, and were quickly healed; the first case was plastered and tedious, but the disease, fungus hæmatodes, which caused the amputation, was formidable. I am happy to state that the man enjoys good health. I wish to add another case in testimony of the utility of water-dressing in flap-amputation, and as I was doubtful of its applicability in the circular operation, I shall avail myself of Mr. Leach's experience when an opportunity offers.

George Robert, æt. 23, met with an accident in his left wrist about two years since on board-ship at the Newfoundland fishery; he thought it was only a sprain, and continued his work. When he applied to me, four or five months

ago, the back of his hand was distended with matter, and he suffered acute pain. I gave exit to the matter, and fixed the starch-splint to favour anchylosis; I also prescribed iodine and sarsaparilla.

He attended for a few weeks, and was apparently improving; however, he discontinued coming, and as he lived six miles from me, I lost sight of him till the 31st of August, when he sent for me to visit him. I found he had removed the splint, and was applying cold water by the advice of an amateur physician; he had cough, was emaciated, had not slept for many nights from the pain of his wrist; he told me two of his brothers died of decline. He was anxious for the amputation, and as I could not discover, on examination, any organic affection in the chest, I had him brought into town, and on the 3d of September removed the fore-arm at the middle third with double flap, as described in Liston's Operative Surgery: four ligatures were applied, the flaps kept in position by one central suture; no plaster was used, but lint wet in water fresh from the pump, which was continued for seven hours; half a yard of oiled silk protected the bed, and conducted the water into a vessel. In former cases, where attendants were scarce, I applied the cold water by means of woollen threads suspended from a saucer over the stump.

The isinglass plaster and warm water-dressing with oiled silk, were then applied and changed often. On the second day the suture was removed; on the third the flaps were supported by a bandage; he had slept well, and suffered very little pain: on that day he walked from his close lodging to breathe the sea air: his cough was improving. The seventh day he went to his home in the country, and came every morning in a cart for me to dress his stump. On the ninth day the last ligature was removed; the stump was very healthy, and closed: it was cicatrized within a month from the amputation. The granulations were touched two or three times with lunar caustic. When last I saw him he could press on the cicatrix, and was about to have an apparatus fitted to the stump: I directed him not to work too soon: he still coughed a little.

I consider the cold water acts beneficially in causing the vessels to contract, and in preventing much effusion and swelling: warm moisture is subsequently requisite, to encourage suppuration, till the ligatures are removed, when it becoms a simple wound, and heals by simple means.—I am, sir,

Your obedient servant,
ALEXANDER LEIGH, A.B. M.B.
Late Royal Rifles.

Olympic Place, Jersey,
Nov. 13, 1843.

CONTRIBUTIONS
TO
ANATOMY AND PHYSIOLOGY.

BY ROBERT KNOX, M.D. F.R.S.E.
Lecturer on Anatomy and Physiology, and Corresponding Member of the French Academy of Medicine.

[Continued from p. 243.]

(For the London Medical Gazette.)

Hermaphroditism: a Memoir read to the Royal Society of Edinburgh in 1827 *and* 1828.

PART II.

IT can scarcely have escaped the notice of even superficial observers, that there are many organs and parts of animals of whose use or functions we are altogether or nearly ignorant. The inquiring mind is stimulated to attempt the discovery of the uses of the various parts of animal bodies by a principle inherent and imperious; the same which urges us to assign a cause for every thing, as "all things come by cause." If the mind be cautious, it suspends its judgment as to what is obscure and doubtful; if metaphysical, it flies to abstract and mystical causes; if ignorant and prejudiced, it resorts to sophistry, subterfuge, and falsehood, to support the flimsy theories daily devised by minds of this description. No good reason can be shown why anatomical and physiological science should be exempt from the general fate of other sciences, and consequently we meet with all these applications, or misapplications, of human reason to diverse and invert *uses*, for the complicated machinery of animal bodies. The obvious uses of many parts were not to be mistaken, and it might even be shewn of others why they do assume this or that form; but it will be found that the extent of correct reasoning in these matters is excessively limited — to a degree, indeed, that few persons ima-

gine, and still fewer are willing to believe.

That parts exist in animal bodies of all kinds, with whose uses we are not acquainted, is, then, an undoubted fact; it might even be almost shown that they have no use, without qualifying it with the phrase essential. Parts of the kind I speak of exist in the human body in its adult and fœtal state, in the male and female of man and of most other animals. Organs which we know to be essential to the existence of one class of animals, exist in others where evidently they cannot serve any useful purpose; for it is not with animal bodies as with machinery, however complicated, in the investigation of which the mind is fully aided by a knowledge of the *intentions of the artist.* His wisdom is unfolded to us, but who can guess at the plans of nature in all her details? To meet these difficulties, anatomists, physiologists, and others, have devised a number of principles, with a view to explain the presence of these organs: thus, the horse has but one toe on each foot which is perfect, but two small rudimentary toes are known to exist on each side the perfect one; and these are called rudimentary, supernumerary, useless as a part of the foot, but placed there by a *general analogy* of structure which nature is said to observe in the construction of chemical bodies; and thus we frequently find physiologists employing phrases similar to these: "the parts we now speak of are present in this animal, not because they are required, or are of any use, in the œconomy of the individual, but because nature loves analogy, and has placed these superfluous organs there to preserve an analogy in her works."

I have always thought this style of reasoning, or at least the language employed to express its results, exceedingly faulty, and even absolutely incorrect, but have not, until the present time, seen what could advantageously be substituted for it. All animals are formed upon one plan; for, abstractedly and physiologically considered, there is but one great object in their creation, in the exercise of the functions constituting life. Aristotle, Galen, and most anatomists of those ages, contented themselves with stating these analogies in a general way, descending only to minute and particular details occasionally, and with a reference to certain organs, such as those of secretion. These doctrines of analogy were well understood by them, and formed a good basis for their physiological reasoning

Anatomical science has been progressive; and thus attempts have been made to give to these somewhat vague and ill-defined doctrines of the ancients a more precise character. It could not be overlooked, that the human being, during its fœtal state of existence, passes through forms which do not permanently belong to it; that these forms are generally fugacious, and intended to be so; but that occasionally they are permanent, and thus establish a strange, mysterious, and unexpected resemblance, between man and animals placed lower in the scale of being; and hence the doctrine of creology came to be pushed still further, and it was laid down as a law, that the human fœtus, and indeed the fœtus of all the mammalia, is *forced* to pass, in its embryo and fœtal state, through various grades or types of organization, proceeding as it were from below upwards; from the most simple to the most complex; from the zoophite or polype to man.

If any of the mammalia happen to present at birth anomalous and irregular structures, they are speedily traced to some regular structure in the lower divisions of the scale of being; the absence of the ribs at birth in an animal naturally possessing them, is simply a repetition of the structure in certain reptiles; and, besides, it was obvious that in the very early condition of the embryo the limbs are not formed. If the head were wanting, it is no prodigy; are not the acephalous mollusca without heads? if the intestinal tube terminate in a *cul de sac*, this is the exact state of certain echinodermata; and that an animal high in the scale, and in whom the sexes are naturally divided into two individuals, requiring both to constitute a species, should yet in some rare cases possess both kinds of organs, here anatomists, supporters of the doctrines of "formations arretées," saw nothing extraordinary in all this, for many of the lower clases are hermaphrodite; and as the embryo of the higher, man not excepted, has to pass, is forced to pass, through all the various shades of organization, the circumstance of his

being formed occasionally with hermaphrodite structure could not be regarded as extraordinary or unexpected.

That these doctrines are in a great measure abstract and metaphysical, no reasonable person, I think, can doubt, though it is very probable that they may be, and indeed already have been, adopted as great physical truths, capable of demonstration by intuitive or direct observation of structure, by persons who, the less they know of anatomical and zoological matters, are more anxious to catch at metaphysical speculations as to the structure; like the young physicians described by Galen, who were fond of discussing *general doctrines* about the *membranes of the body*, the intimate texture of the brain, the theories of generation, and other wild and mystical subjects which human reason will probably never compass*.

But although we reject the conclusions, we cannot overlook the facts on which these abstract metaphysical notions have been founded. If it be true that the chick at an early period of its growth possesses a bronchial as well as pulmonary system, what a mysterious structure is here unfolded! Why should the embryo of man, or of any mammiferous animal, possess, even at its earliest period of growth, the system of the allantois, and all the complicated apparatus of the omphalo-mesenteric vessels and vesicle: these are structures which are indeed essential to the growth and perpetuation of birds, but how of the mammalia? Not, surely, to enable the embryo to pass a few hours or a few days of its early existence, and yet this were a more rational opinion than to suppose all animated nature formed to undergo a metamorphosis as extensive as extraordinary, suspended by no prodigy which imposture has detected or credulity believed: a metamorphosis embracing within the period of a few months the whole range of the animal creation.

With those who delight in metaphysical speculation, who find, as the phrase is, "omnia in omnibus," these abstractions and metaphysical fictions (for occasionally they are merely so,) speedily assume the form of well adjusted and confirmed theories, admitting, as they think, of "demonstration." The "creative idea," at whose object we can but guess, is laid down as a physical law, thoroughly investigated. The doctrine of "formation arretées" is a good doctrine in itself, and by it we may unquestionably solve many otherwise perplexing problems in physiology; and so also are the great doctrines of unity of organization; what I object to is their being mistaken for positive inductions derived always from physical facts. That some malformations may be so explained cannot be doubted, but there is no truth whatever in physics, that the human embryo is necessarily forced to pass through a series of metamorphoses whose outline embraces the vast range of living adult beings, prior to its assuming the human form; nothing of this kind can be demonstrated; and when the "malformation," or "deformation," of the human embryo is appealed to as a proof that such metamorphoses were contemplated, and such a scale of development ordered, to me it appears, with all becoming deference to the opinions of others, that these theorists confound the abstract theory of the creative idea, whose essence must be "unity of organization," with the proofs that such a "unity" exists: or, in other words, they offer the occasional production of forms in the human embryo resembling the brute as proofs that the embryo was passing through these forms; whereas such forms simply shew that the laws of deformation are regular; that living matter never runs into fantastic forms, but simply depicts forms already contemplated by, and embraced within, nature's great plan*.

But whatever be the view adopted with reference to these difficult physiological and psychological doctrines, it is known to all anatomists that in the higher orders of animals the sexes are divided so as to require two individuals to form the species and to perpetuate that species: it is also well understood, that in some classes of the animal kingdom the generative organs termed male and female exist in the same indi-

* The reading of the passage referred to in Galen, forcibly recalled to my recollection the education of the Edinburgh graduate, and the exhibitions these young physicians were fond of making in certain medical societies, which like the school to which they belonged, were once great, but are now are all but extinct.—*Troja fuit.*

* I admit unhesitatingly that in the human fœtus there are forms and structures which, when they persist to the adult state (the transcendental laws prevailing over the special) give to the human form a strong resemblance to some of the lower animals—the pelvis, for example.

vidual, and that yet the concurrence of two individuals is required to eternize the race; and lastly, that perhaps in some of the lowest tribes of animals, and seemingly in many plants, both kinds of organs are present and effective in one individual without the aid of another.

If, in this disunion of the sexes, nature had rigidly drawn the line of demarcation, if vestiges of both sets of organs were not found in each individual, no such inquiry as the present could possibly have been instituted. But anatomists of all ages have admitted the contrary, and to explain the appearances, whether common or uncommon, whether frequent or rare, whether regular or irregular, numerous theories have been devised. Some of these theories have imagined the fœtus to be at first of no sex, and this, I think, is the more commonly received one: others have imagined it to possess the elements of both sexes, but, by a strange inconsistency, have imagined the organs convertible into each other. Previous to considering the merits of these opinions, let us first proceed to determine, if possible, the following points:—

What are the essential female organs? What the male? And, What the condition of the fœtus in its earliest stages?

INTERRUPTED CIRCULATION.

To the Editor of the Medical Gazette.

Sir,

In compliance with the request of some medical friends, I have consented to publish an account of my late serious indisposition, and of my perfect recovery from it, as an illustration of some remarkable properties in the mineral waters of Bath.

My case is not an uncommon one in very old people like myself, but I suspect that in many such it is conjectured to arise from organic mischief, when, in fact, none whatever is present.

The following case, however, will shew that even in the very advanced stages of life, the loss of vitality of the heart may be perfectly restored. But for how long a time, is quite another question.

About six years ago, being then in my 74th year, I was attacked by a regular tertian ague, in consequence of exposure to cold and damp air, in autumn. The paroxysms were severe, although they generally terminated in the sweating stage in less than three hours. The disease yielded to the sulphate of quinine and a suitable diet. I suspect that I did not continue the use of the tonic long enough, for after every symptom of fever had subsided, I remained much enfeebled; but as my appetite, sleep, and all the functions, were now in good order, I attributed the sensation of great weakness to old age.

On examining my pulse one day (which I am not accustomed to do), I discovered that it was frequently interrupted, sometimes every 10th, 12th, 16th, or 20th pulsation, sometimes not oftener than once in every 40th or 60th beat. The intervals of pulsation did not occupy a space of time greater than what might have been filled up by two, or at most three, pulsations. I was free from every other untoward symptom, such as palpitations, breathlessness, or swelling of the feet and ankles. I slept without sudden alarm, and equally well on either side, and on my back. I therefore concluded that the interrupted circulation was the effect of general weakness, and I had again recourse to the quinine, a generous diet, and a few glasses of old port wine, attending, at the same time, as may be guessed, to the evacuations.

Although I soon felt better, that is, stronger, under this treatment, it did not cure the chief complaint, and I therefore resolved to go to Bath, and try its waters, knowing, from old experience in others, its cardiac virtues, that is, its specifically stimulating action on the heart.

On arriving in that city at the end of October, 1838, I laid my case before my good friends Dr. Barlow and Dr. James Watson, who agreed with me in my mode of considering it, and encouraged me to try the internal use of the waters.

I had not drunk them for more than three weeks when my pulse became perfectly regular.

I returned home in the spring of 1839, and from that time, until about six months ago, I enjoyed excellent health; but then I was again attacked with the irregular action of the heart, and in a more alarming degree than

formerly, for now the pulse was interrupted after every 2d, 3d, 4th, or 6th beat, and the sense of general weakness and languor was proportionally great; at no time of the night or day could I count 19 consecutive pulsations, and it is remarkable that the suspension of pulse was as frequent in a horizontal position, and even after food and wine, as at any other time.

To prevent any foolish conjecture or quibble, I ought to remark, that it was the action of the heart (the contraction of the left ventricle) which was interrupted, and not the action of the arteries, which seemed to be endowed with their natural elasticity.

Being now in my 80th year, I had reason to suspect some organic affection of the valves to be the root of the evil, and yet there were many good reasons for doubting this, which, as may be easily imagined, I fondly cherished.

When organic mischief is in progress either in the valves of the heart or in the aorta, it will generally be found that independently of an interrupted circulation, there are other very remarkable symptoms, such as occasional palpitation, and often a preternatural hardness or sharpness of the pulse, and also a prevailing want of rhythm, if I may use the expression, between any consecutive pulsations. I had none of these symptoms, nor any œdematous swelling of the feet and ankles; nevertheless I thought it prudent to have the heart examined by the stethoscope before I again tried the Bath waters.

I arrived in that city for the second time on the 17th of August last, and applied to my friend Dr. James Watson, who I knew to be an expert and experienced explorator of the chest and its contents. After a patient examination, he pronounced the heart to be free from any organic derangement whatever, and consequently I lost no time in visiting the pump-room.

I began as formerly with a moderate quantity, namely, 4 ounces every morning at 7 o'clock, but I soon increased the quantity to 12 ounces twice a day, namely at 7 o'clock A.M. and half-past 2 o'clock, P.M.

At the end of the first week my pulse was greatly improved, and before three weeks had elapsed there was not a single interruption to be discovered in it either by Dr. W. or myself, and from that time to the date of this letter the same regularity of the heart's action has continued.

When we reflect how very small is the quantity of carbonate of iron, and the other saline ingredients, of the Bath waters, we may well wonder at their stimulant properties.

Professor Daubeny has, I believe, detected a trace of brome in them, but I do not know any facts which prove what are the properties of this elementary substance except as a virulent poison, and I am much inclined to think, that some hitherto unknown principle, probably of a very volatile kind, will hereafter be discovered in these waters, for their effects in different maladies are inexplicable by the knowledge we possess at present of their mineral contents.

Iodine has been detected in them by Mr. Cuff, a chemist of Bath, but the largest quantity of that substance which Professor Daubeny discovered in any of the mineral springs of the south of England did not exceed a single grain in ten gallons of water. Now it is scarcely to be credited that the virtues of the Bath waters as a stimulant can depend on so small a quantity of this subtle agent, especially when it is considered that from 12 to 16 ounces of the water is the largest quantity which is commonly drank either in the morning or the afternoon.

Before I close my letter I wish to make one observation, which I deem of importance to a numerous class of invalids, especially as I do not think it has been insisted on by any of the numerous writers on the Bath waters.

It is the fashion to frequent that city for the purposes of health, only in the spring and autumn; this I consider as a practical error, for I am persuaded that a short summer course of the waters would be found more effectual, inasmuch as they could be drank at an earlier hour, and in larger quantities, in the summer, than during our cold springs and autumns.

I am aware that there is a fashionable prejudice against this opinion, which will not be easily overcome. This city, particularly the lower part of it, is said to be too hot and oppressive for a summer residence, and yet many of those who think so go to the valley of Baden Baden, where the summer heat is comparatively greater; but then it is the fashion to go there,

which explains why it is medicinally better! I do not believe that in any part of England, except on the tops of Welch, Westmoreland, or Scotch mountains, a freer or purer atmosphere can be found than in the upper parts of the city of Bath. Until it is frequented during the summer, by those who stand in need of its celebrated springs, their virtues will never, in my opinion, be fully appreciated.

I am sir,
Your obedient servant,
A. CRICHTON.

Seal Grove, near Sevenoaks,
Nov. 16, 1843.

MEDICAL GAZETTE.

Friday, December 1, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

MEDICINE IN HINDOSTAN.

OUR Indian empire presents at this time a most interesting spectacle. While, on the one hand, the old fondness for territorial acquisitions still remains, strong as in the days of Clive or Wellesley; on the other, a new feature has sprung up, unimagined in their time — the education of the native youth in the learning of Europe. The probable effect of this great measure upon Indian politics, and the general condition of our eastern fellow-subjects, it is not our present purpose to investigate. It will be sufficient thus to have glanced at it, ere proceeding to a brief exposition of the present state of medicine in Hindostan, and of the most recent additions to the stock of medical knowledge, for which we stand indebted to our brethren of the East. A volume which we have recently received* will supply us with the requisite details; and it cannot but be useful to watch the advances of medical science in the East. The influence of climate on disease is a subject pregnant with interest to the pathologist; and a city like Calcutta, rivalling London in the amount of its population, affords the amplest opportunities for the display of surgical skill.

Little more than twenty years ago, the native population of India were compelled to surrender themselves in sickness to the ignorance and chicanery of quacks and conjurors, whose miserable arts were the chief substitutes for medical practice in the East. In 1822, the Government of India became sensible of the necessity of some reform here. A certain number of natives, therefore, were directed to be trained up in the medical profession for the use of the state, in an institution devoted to that purpose. They were taught by means of translations and *viva voce* instruction *in their own language*. Very little good, however, was effected by these means. The acquirements of these young men proved to be very imperfect; and such as they were, the advantages derivable from them were confined to the military and civil departments of the East India Company. The great mass of the population, who stood the most in need of assistance, derived no benefit whatever from the system of medical instruction then pursued.

So prominent, indeed, were the defects of this arrangement, that in 1835, Lord William Bentinck, convinced of its inadequacy to the wants of that rapidly improving country, determined to form another institution, wherein native youths might pursue the study of medicine with all the advantages of an European system of instruction. This institution was so framed as to suit the wants not of the Government service only, but of the population at large. Its doors were to be open to the youths of all nations, natives as

* Transactions of the Medical and Physical Society of Calcutta, vol. viii. part 2. Calcutta, 1842.

well as foreigners, and the science of medicine was to be taught upon a scale commensurate with the magnificent objects in view.

Such was the basis on which the Medical College of Calcutta was founded. Its progress since 1835 has been in every respect such as might have been expected from the right spirit in which the measure was framed. It is dispensing far and wide the blessings of sound learning. Not only are the youths of the Indian peninsula there educated, but those also of Ceylon.

In the new Calcutta School of Medicine, the *English language* forms the medium of instruction, and the students are furnished with all the aids and appliances which the best regulated schools of Europe possess. Lectures are regularly delivered upon every branch of medical learning, with the exception of midwifery. This exception is made in deference to the peculiar customs and prejudices of the people. Practical anatomy is pursued with a degree of zeal and diligence which would do honour to Gower Street or King's College. The students are young men of good general acquirements, chiefly Hindoos, of all castes, including Brahmins of the highest rank; but besides them, there are several youths born of European parents in India. The industry and intelligence of the whole body of students are very conspicuous, and fully equal to the opportunities of instruction afforded them.

It requires but little foresight to estimate the consequences. From the walls of this institution there will issue annually, from this period, a gradually increasing band of intelligent and well-informed practitioners, who will spread over the country, and in time banish the reign of empiricism and ignorance. The more sanguine may even anticipate the day when surgery and medicine may be enlightened by the labours of black doctors; when the vigour of Asiatic genius shall revive, and burn with more than its early splendour; and when "wise men from the east" shall again be seen in the cities of the west.

An institution for the education of the native youth in medicine has lately also been established at Madras, and the accounts which we have received speak in high terms of the progress there made by the students. The Madras institution, however, is more limited in its nature and objects than the College of Calcutta. The education afforded to the pupils is less comprehensive, and it is destined exclusively for the uses of the state. We may hope to see it, however, gradually enlarging its sphere, so as to become generally useful for the amelioration of medical science among the native subjects of that presidency. We presume that Bombay will not long allow itself to be distanced in the career of scientific improvement.

The fruits of the new system have not yet been tasted in the shape of an "Essay on Cholera," by Uma Churn Sett, Esq., or "Observations on the Cannabis Indica," by Dwarkanauth Goopto, Esq.; but the time is not far distant when these things will happen. Both these gentlemen are members of the Medical and Physical Society of Calcutta, which is an institution from which a long series of most valuable medical papers have emanated, as all our readers must know.

Until we can gather information from our coloured brethren of the east, we must be content with such instruction as their masters, the professors in the Calcutta College, and their coadjutors, can give us.

Among the subjects on which the medical journals of the east may reasonably be expected to enlighten us,

the most prominent is cholera. The following is the latest information which we have been enabled to pick up on that highly interesting and curious disease.

Cholera prevailed in Calcutta with considerable severity in the early part of 1840. The prostration of the vital powers was most remarkable, even from the earliest periods. It was remarked that the greater number of the seizures took place at night, and that, in spite of every remedial measure that could be thought of, reaction never took place. The reported deaths by cholera, in the months of January and February 1840, were 1532. In the Howrah Hospital, out of 33 cholera cases treated, 16 died, shewing that no great improvement has taken place in the old methods of treatment. The chief novelty that we notice in this respect is the employment of the tincture of hemp, to which Professor O'Shaughnessy attributes the recovery of several Europeans. This remedy was given at first in two-drachm doses, one drachm being repeated occasionally as required. Several cases which appeared hopeless, the professor adds, were thus saved. Intoxication generally followed in a quarter of an hour after the first dose; vomiting and purging were almost instantly checked, and the patient slept for some hours. We regret to add that, at the Howrah Hospital, the same success was not experienced. Dr. Stewart speaks highly of the advantages derivable in cholera from friction with dry ginger powder. By absorbing the cold clammy sweat, it lessens the deadly coldness of the surface. It appears, too, to be beneficial, by stimulating the capillary circulation.

Dysentery is another subject on which our Asiatic brethren have had a too fatal experience. The loss which the European troops, particularly the 26th and 49th Foot, experienced from dysentery in Chusan, is frightful. The details are furnished us by Mr. Hutchinson, of the Bengal Medical Establishment. The dependence of dysentery upon malaria is here manifested most unequivocally. Among the troops sent to Manilla, to try the effect of change of climate on the chronic forms of Chusan dysentery, the mortality was very great, though the weather was fine, and the sick were abundantly supplied with good bread and fresh meat. The only medicine that was found of the least service was the old-fashioned combination of calomel and opium (five grains of the former to one of the latter), taken twice a day. Of 209 men embarked, 85 died on the voyage. The virulence of the dysenteric miasm of Chusan seems to have bid defiance to all medicine. These cases of dysentery were mixed with a few of intermittent and remittent fever.

Some interesting particulars regarding the prevalence of small-pox in the East, and the diffusion of vaccination among the population of Calcutta, seem to us worthy of record, though the dates are not so recent as we could have wished. In the year 1838, Calcutta was visited by a severe epidemic small-pox, which proved fatal to very large numbers. Out of 828 fatal cases, visited and reported on the spot, 497 were males, 331 females. 253 were under five years of age; between 5 and 15, 282; between 15 and 25, 183; upwards of 25, 110; so that all ages were alike sufferers. The deaths by small-pox in that year were six per cent. of the total mortality. It is at any rate a curious coincidence, if nothing else, that London was visited by epidemic small-pox in that same year, and that the proportion of deaths by small-pox, compared to the total mortality, was here seven per cent.

Small-pox is not a constant disease

at Calcutta, but visits it, just as it does other large towns, epidemically. The demand for vaccine protection there, as here, bears a marked relation to the degree of alarm prevailing during the epidemic invasion. In the three years 1834, 1835, 1836, the numbers vaccinated at the Government Vaccine Establishment were respectively 36, 53, 16. Total in three years, 105! In 1838, the number vaccinated was 1507! The same thing happens in England, and must always happen, so long as human nature remains the same. Out of sight out of mind! It is only by having the bane before our eyes that we think of applying to the antidote. It is only by the occurrence of a bad fire that people are driven to ensure their houses.

We had intended to add some hints on the pathology of *coup de soleil*, but our space warns us to desist. Much, however, might still be gleaned from the rich field of "Medicine in Hindostan." We may be tempted some day to interest our readers in the matter of Indian surgery.

COMPLICATED MENSTRUATION,

AS ILLUSTRATED IN TWO CASES.

By W. Detmold, M.D. of New York.

Case I. — The following case represents features as interesting in a physiological point of view, as they are perhaps of rare occurrence. I therefore do not hesitate to give it publicity, though I have myself only for a short period been an observer and eye-witness of the course of the disease. The medical attendants were changed several times during the illness of the patient, and having been myself called in consultation only in the latter part of it, I have been obliged to rely for the history of the case, previously to my seeing it, on the statement of the patient and her family, and of the physicians whom I found in attendance at the time. The case, however, has been seen by a large number of professional men of the highest standing in this city, and I myself had an opportunity of showing the patient to several medical men from other parts of the country; so that as regards the correctness and truth of the history of the main and most interesting features of the case (and to those I shall limit myself here) there cannot be any doubt. As the repeated change of the medical attendants, and my only temporary observation of the case, make it impossible for me to give an exact account of the medical treatment followed during the different stages of the disease, and as I, besides, consider the case less interesting in a therapeutic point of view than in a pathological and physiological, I shall omit here the treatment entirely.

Miss R——, of this city, of dark hair and complexion, had, with the exception of the ordinary diseases of childhood, always enjoyed good health, and she was apparently of a robust constitution. When fourteen years of age her menses first appeared, without any disturbance in her general health; and after that time she regularly menstruated for about one year. On the 17th of April, 1842, during one of the menstrual periods, she had, at the same time, (according to her own and her family's statement), a bilious attack, with a severe sore throat. She had leeches applied to the throat, and was bled in the arm. Her menstruation stopped during the night succeeding the venesection, and the following morning the patient had lost the use of her left leg, which became very painful, and began to swell from the hips down to the toes. Simultaneously with the swelling of the leg, a singular symptom appeared. *The whole surface of the body became covered with black hair*, so that the arms, legs, and chest of the young lady looked more like those of a hairy man of forty, while the upper lip and cheeks were covered with a delicate dark down, as we sometimes see in young men approaching the period of puberty.

I saw the patient about three months after the commencement of the disease, which then had just passed its acmé, and found her in the following condition. Her whole body was very much emaciated, and her countenance bore an expression of suffering, which was increased to the highest degree by the mere approach of any person to the pillows on which her leg rested. On her upper lip and cheeks was the above mentioned down, and her chest, arms, and legs, were hairy as just described. The hair showed, however, much more on the sound leg than on the diseased one, for as the sound leg was emaciated almost to bone and skin, the hair on it appeared much more dense than on the other leg, the skin of which was in the highest degree of tension from the enormous swelling. The circumference around the knee was twenty-two inches, and the thigh and leg were swollen in proportion. The skin was neither changed in temperature nor colour; the swelling was neither

phlegmonous nor œdematous; to the touch it was solid, and felt like a plastic deposit; it resembled hypertrophia, and the whole limb presented somewhat the appearance of phlegmasia alba. Outside and above the knee was a superficial and limited fluctuation, which, on being opened, discharged for several days a moderate quantity of healthy-looking pus; and a similar fluctuation appeared a few weeks after directly over the patella. Both these abscesses were, however, in no proportion whatsoever to the size of the leg, and they seemed altogether secondary, that is, not connected with the *causa proxima* of the disease, but rather consecutive upon the enormous swelling. The patient suffered intense pain from the slightest attempt at moving the limb, over which she herself had no control at all. She had two large ulcers from decubitus over the os sacrum, and the pulse was about one hundred in a minute, having been a few days previously as high as one hundred and twenty. Her appetite was good, and altogether the disease, as already stated, seemed to have passed its acmé; for the patient began gradually to improve, the pulse became daily less frequent, the swelling of the leg diminished by slow degrees, the limb became daily less painful, the ulcers on the back healed up, and about four months and a half after she was taken ill, she began to move about upon crutches. The unnatural growth of hair upon her body and limbs gradually disappeared, and about six months from the commencement of the disease the menses made their reappearance. From that time she continued to improve steadily, and she is now, in June 1843, a fine hearty-looking woman, with no remains of her extraordinary illness, except a false anchylosis of the knee-joint, evidently caused by plastic deposit in soft parts and ligamentous apertures around the joint. Otherwise she has the full use of her limbs, with the exception that after much exercise she has a feeling of fatigue in that leg, and it becomes slightly œdematous.

I have thus given only, as I premised in the beginning, an outline of the characteristic features of the case, without entering into the minutes of the daily changes even at the period when I had the opportunity of doing so; and I will now, in conclusion, only state that the application of ice to the swollen limb seemed to have been the most beneficial remedial agent resorted to. I also abstain from commenting on the physiology and pathology of the case, which seem, as far as the growth of the hair is concerned, a mistake of nature in anticipating the period when menstruation ceases naturally.

Case II.—As I have given the above case mainly on account of its pathological and physiological interest, without reference to therapeutics, I do not deem it out of place to add the following case, of which the principal interest lies perhaps in the therapeutical treatment pursued.

Mrs. ——, of this city, of lymphatic temperament, had, until her marriage, which occurred when she was very young, regularly menstruated. She has now been married eight years. Soon after her marriage, her menstrual functions became deranged, the pain at each period being so excessive that she had invariably to keep her bed for about a week. The pain and uterine spasms were at times so violent as to produce convulsions; and, withal, she never lost more than a few drops of blood during the first few hours of each menstrual period. She had never, during the eight years of her matrimony, been pregnant. She had been under the care of several medical men, and she had at different times been put under the influence of various remedies, as well for momentary relief during the paroxysms of her menstrual spasms as in the interim for a radical cure. It was all, however, to no good effect, for she only obtained temporary relief from copious venesections which were repeated every few months.

In August, 1842, she applied to me for relief. Besides her regular attacks of illness, every four weeks, she complained of a continual feeling of soreness above the os pubis, which was much increased by intercourse with her husband. I proposed, and she submitted, for the first time, to an examination per vaginam. The collum uteri felt rather large and soft; and when the speculum was introduced, the labia of the os tincæ showed a dark purple colour. I repeated the examination at her next menstrual evacuation, and found the same appearances as before, only stronger marked, showing evidently a high degree of venous congestion. I advised the immediate application of six leeches to the os tincæ. The after bleeding was very copious, so much so that her husband became alarmed during the night, and sent for me to stop it; but as I found it not excessive, I allowed it to continue for several days. I did not ascertain whether the blood flowed from the leech bites or from the interior of the uterus. The patient, however, had neither pain nor spasm of any kind, during the menstrual period, being the first time in about eight years. I ordered the application of the leeches to be repeated every month, upon the first warning of the approaching menstruation, and each time with the same beneficial result. Besides, I ordered, during the intervening time, injections of cold water per vaginam, and advised abstaining from intercourse with her husband. At the same time, I prescribed a simple and healthy diet, with exercise in the open air; and as the patient was evidently

doing well under this treatment, I did not deem any medicine necessary except keeping her bowels regular with small doses of rad. rhei. This course of treatment was carried on for about four or five months, the leeches having been applied four times, when, as the soreness over the os pubis had long since entirely disappeared, the patient did not deem it necessary to have them applied a fifth time; and the result was, to her great surprise and delight, a regular menstruation, without the least pain, a sufficient quantity of blood being lost without the leeches. At her next term, she had again a regular menstrual evacuation, and immediately after that, she must have conceived, for she began to complain of sickness at the stomach in the morning, exhibiting, in a word, all the usual symptoms of the early stage of pregnancy. Her menses now stopped for three months without any disturbance in her general health; but, unfortunately, a few weeks ago, in consequence of imprudence in taking a great deal of exercise, and a long ride in a jolting stage, she had a miscarriage, discharging a perfectly normal and well developed ovum. Since then she has had a regular and sufficiently abundant menstrual evacuation.—*The New York Journ. of Med. & Collateral Sciences.*

COPPER IN ORGANIC TISSUES.

M. Julius Rossignon, of Lyons, has lately addressed a communication to the Academy of Sciences, on the presence of copper in the organic tissues of a great number of vegetables and animals.

It is well known that MM. Danger and Flandin have endeavoured in their last memoir to establish the non-existence of copper in the human body in its normal state. M. Rossignon proposes in his note to contradict their results, and to confirm the existence of copper in the healthy human body.

His experiments show that copper exists not only in the blood and muscular fibre of man, but in a great number of domestic animals, and in the vegetables on which they feed.

Experiments made on dogs in 1839 showed that copper existed in them. M. Dumas having mentioned in his lectures, that wheat contains an appreciable quantity of copper, which is absorbed by our digestive process, M. Rossignon was induced by his knowledge of this fact to continue his researches on the normal existence of copper in organised beings, and particularly in the alimentary substances most used by man.

The following are some of the results to which M. Rossignon more particularly directs our attention.

The *gelatine* obtained by the philanthropic process of the *hôpital St. Louis*, when carbonized in a close vessel, affords 0.03 of pure copper in 100 parts of carbon.

The *boiled sorrel* of the green-grocers affords as much as two per cent of the neutral oxalate of copper.

Ménier chocolate affords carbon containing 0.07 of copper.

Marquis chocolate affords only 0.05.

Bread from the principal bakers in Paris gave from 0.05 to 0.08 of copper in 1000 parts of carbonized bread.

Coffee contains a few atoms of copper.

Succory affords more.

Madder contains a considerable quantity.

Sugar affords a carbon, which, when rigorously analysed, furnishes copper, and sometimes lead.

Barley-sugar affords copper.

Fecula sugar, when carbonized, contains as much as four per cent. of copper.

Lastly, M. Rossignon says that since reading the memoir of MM. Danger and Flandin, he has found very small but appreciable quantities of copper, in human semen, in the excrements of fowls, in eggs, and in the eye of the ox completely calcined in a close vessel.—*Gazette Médicale.*

EFFECT OF THE ANISODUS LURIDUS ON THE PUPIL.

By Dr. Lejeune.

The *Anisodus luridus*, a perennial herbaceous plant belonging to the natural family of the *Solaneæ*, was brought from Nepaul to Europe in 1824. In our gardens it often does not come out till the middle of June; it then springs up with astonishing rapidity, and soon surpasses the *Atropa Belladonna* in height. It strikes its root deep into the ground, and withstands the severest winters. It is of a pale green colour.

A tincture prepared with an ounce of the dried leaves to eight ounces of alcohol at 20 degrees*, when given to different patients, produced an extreme dilatation of the pupil; the highest dose being twenty drops in the 24 hours. Two of them suffered from amaurosis for a short time, and their blindness did not go off till the medicine was omitted.—*Gazette Médicale*, Nov. 4, 1843; from the *Journal de Médecine de Bruxelles.*

INFREQUENCY OF PHTHISIS IN MARSHY COUNTRIES.

At the meeting of the Academy of Medicine, on the 7th of November, a letter was read,

* Perhaps 20 deg. on Baume's hydrometer, equal to *Spiritus tenuior*, or proof spirit.—*Translator's Note.*

addressed to the President by M. Nepple, on the infrequency of phthisis in marshy districts. After being read by the secretary, it was referred to the committee appointed to inquire into the antagonism supposed to exist between phthisis and marsh-fevers.

M. Olliver (of Angers) requested the attention of the Academy to this letter, which seemed to him to contain important facts. It confirmed what Brera said, some years ago, on the infrequency of phthisis in Venice, which he, too, attributed to the emanations from the lakes.

During Dr. Olliver's stay at Venice, he endeavoured to verify this fact; and he found that there were not more than seven or eight phthisical patients among twelve or fourteen hundred annually admitted into the hospitals of the town. Almost the whole of the remainder were suffering from intermittent fever or rheumatism.—*Gazette Médicale*, Nov. 11, 1843.

NAPHTHA.

To the Editor of the Medical Gazette.

Sir,

Mr. Proctor's letter on the curative effects of naphtha, in the Medical Gazette of Nov. 17, leads your readers to infer that the "case" he details was *rejected* as consumptive at the Colchester Hospital.

We beg to state, that no individual bearing the name of "Charles Perry" has presented himself for admission to this institution.—We are, sir,

Yours faithfully,

E. Williams,
R. Chambers, } Physicians.

Essex and Colchester Hospital,
Nov. 20, 1843.

ST. GEORGE'S HOSPITAL.

We regret to learn that the state of Mr. Babington's health compels him to resign the office of surgeon to St. George's Hospital. This causes a double vacancy; the assistant-surgeon, almost as a matter of course, becoming surgeon, so that the real vacancy is in *his* appointment, for which a very active canvass is now going on.

MIDDLESEX HOSPITAL.

Dr. Watson has resigned the office of physician to Middlesex Hospital, in which he will, it is to be presumed, be succeeded by Dr. Crawford, the assistant physician, in whose office a vacancy will thus occur.

BOOKS RECEIVED.

The Medical Almanack: a Calendar of Information for the year 1844; being Bissextile or Leap-year.

Elements of Natural Philosophy; being an Experimental Introduction to the Study of the Physical Sciences. By Golding Bird, A.M. M.D. F.R.S. &c. &c. &c. The 2d Edition, revised and enlarged.

The Physiology of Inflammation and the Healing Process. By Benjamin Travers, F.R.S. Surgeon Extraordinay to the Queen, and Surgeon in Ordinary to H. R. H. Prince Albert.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, November 23, 1843.

H. J. Sanderson, Liverpool.—W. Reeves, Carlisle.—J. H. Bailes, Trowbridge.—R. F. Battye, Huddersfield.—J. E. Wales, Brotherton, Yorkshire.—A. W. Rowlands, Nanty, Glo-Monmouthshire.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, November 18, 1843.

Small Pox	7
Measles	40
Scarlatina	51
Hooping Cough	25
Croup	12
Thrush	8
Diarrhœa	15
Dysentery	9
Cholera	0
Influenza	4
Ague	2
Remittent Fever	1
Typhus	42
Erysipelas	10
Syphilis	1
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	170
Diseases of the Lungs and other Organs of Respiration	459
Diseases of the Heart and Blood-vessels	30
Diseases of the Stomach, Liver, and other Organs of Digestion	75
Diseases of the Kidneys, &c.	9
Childbed	4
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	5
Arthritis	0
Rheumatism	2
Diseases of Joints, &c.	9
Carbuncle	0
Phlegmon	0
Ulcer	1
Fistula	0
Diseases of Skin, &c.	2
Dropsy, Cancer, and other Diseases of Uncertain Seat	107
Old Age or Natural Decay	100
Deaths by Violence, Privation, or Intemperance	28
Causes not specified	2
Deaths from all Causes	1230

Errata.—In Mr. Southam's paper, p. 203, 2d col. line 31, *for* "it," *read* "the tumor;" p. 241, 2d col. line 19, *for* "that boldness of surgical energy," *read* "that boldness and energy."

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, DECEMBER 8, 1843.

CLINICAL REMARKS
UPON A
CASE OF HEPATIZATION OF THE LUNG,
Delivered at St. Thomas's Hospital,

By Dr. Barker.

The following case is a good example of the extent to which the healthy structure of the lung may be restored, after it has been hepatised by inflammation.

Anne Muttock, ætat. 26, a servant, was admitted into Anne's ward on the 13th of April, 1843. Complexion fair and florid, skin soft and thin, lips thick, and the general appearance that of a strumous person, though there were no signs of scrofulous disease. She was discharged from a surgical ward about a month ago, having been long affected with abscesses about the left knee—not, however, affecting the joint itself—which were healed, but the cicatrices impeded the movements of the limb.

Three weeks before her admission she was attacked in a manner which she did not describe very precisely or intelligibly; but, it appears, she had rigors, followed by slight febrile heat, and dyspnœa; and the left side soon became painful below the mamma. She took medicine by direction of a medical man; but, apparently, the treatment had not been active: she was not bled, and the medicine produced no effect but purging.

When first examined by me, she lay a little towards the left side; but could lie, for a short time, on the right side, without inconvenience, The breathing was slightly hurried whilst she was at rest, but hardly amounted to dyspnœa, since it caused no inconvenience to the patient; very slight exertion, however, rendered it distressingly rapid. There was frequent, short, hacking cough, without any expectoration or pain in the chest. She had lost flesh since the commencement of the illness, and complained of night perspirations. The pulse was rapid, small, and feeble. The legs became œdematous if she remained long in the erect position. The chest was well shaped. On drawing a full inspiration, the left side was not so fully expanded, whilst, on making a complete expiration, it was not so much contracted, as the right. The sight alone, then, was sufficient to prove defective respiration on the left side; and, as no cause for this could be detected in the form of the chest, it was probable that the lung was either partially impervious to air, or that the pleura was distended with fluid. On percussing the right side of the chest, it appeared naturally resonant in every part, and the respiratory murmurs were healthy, and very loud. The left side, on the contrary, was uniformly and extremely dull on percussion at every part, except for about an inch and a half below the clavicle; and, even in that spot, it was much duller than the corresponding part on the right side. Over the same space indistinct vesicular respiration could be heard; but, in every other part of the left lung, in place of the gentle, rustling sound, caused by the expansion of a healthy lung, was heard the harsh, blowing noise, called tubular or bronchial respiration, caused by the sound made by the air passing along the bronchial tubes, which is deadened when the lung is spongy and healthy, but is conveyed to the surface, and easily perceived by the ear, when the bronchial tubes, remaining pervious, are surrounded by consolidated lung. The voice, also, could be heard on applying the stethoscope to many parts of the central, and even of the lower, portions of the left side of the chest—not passing distinctly through the tube to the ear, as in pectoriloquy, nor reaching the ear in that less distinct manner called bronchophony; but there was a confused inarticulate sound of the voice, such as is heard when the smaller bronchial tubes are surrounded by condensed lung.

My diagnosis in this case was, that the

whole of the lower and middle parts of the left lung were in a state of red hepatization, the result of inflammation occurring three weeks before.

As a correct diagnosis in this case was absolutely necessary, before any rational plan of treatment could be adopted; and as the treatment pursued, would not only have been incorrect, if the obvious want of respiration had depended on other causes than that stated; but would also have been useless and injurious, if the consolidation of the lung had depended on an attack of inflammation of much longer standing than this patient's recent illness; I shall shortly consider the grounds on which my diagnosis was formed, and the objections which may be made to its correctness.

In the first place, it may be thought that the symptoms complained of by the patient, at the period of her first attack, were not sufficiently severe to indicate an attack of pneumonia, so extensive as to affect the whole of one lung. She appears to have had rigors, followed by slight feverish symptoms; some cough, but no expectoration; pain under the left mamma, not very severe; and to have gradually fallen into the state in which she presented herself at the hospital. Although it is now known to all intelligent practitioners that pneumonia is a disease which, notwithstanding its inflammatory nature, and the importance of the organ affected, is often not made manifest by any very prominent symptoms—and that cough, dyspnœa, pain, expectoration, and fever, though often present, and characteristic of the disease, are often wanting, or imperfectly developed—although these facts are known and admitted, the knowledge is often not acted upon—in some cases it is, perhaps, not possessed—and practitioners are too apt to take for granted, that, because the obvious symptoms of chest disease are slight, the disease must necessarily be some mild form of bronchitis or catarrh; and thus pneumonia not unfrequently makes great progress before its first stage is even suspected. Even the expectoration, which, when present, is so decisive a proof of the existence of the disease, is not unfrequently wanting; and the augmented rapidity of the breathing, which is rarely absent, may cause so little inconvenience, and give rise to so little labour in the respiratory movements, that it may be denied by the patient, and not attract the attention of the medical attendant, unless the respirations are counted. I have no doubt the case under discussion was such an one. It must be evident, from the mild remedies, apparently cathartics only, which had been employed, that the nature of the disease had not been suspected before the patient came to the hospital.

The absence, then, of any urgent symptoms at the first attack, or up to the period of admission, cannot be looked upon as any proof, not even as presumptive evidence, that the disease was not pneumonia.

But the lung might have been rendered impervious to air without pneumonia, and there might have been an accidental febrile condition at the time from which the illness was dated, independent of disease of the chest. Was there any thing, then, in the state of the chest itself, to lead us to suppose that it had been affected with pneumonia? The lung might have been rendered equally solid by tubercular matter: but, whatever had rendered the lung impervious to air had affected nearly the whole of one side, and one side only: and it is in the highest degree improbable, 1st, that one lung could be rendered completely solid by tubercle whilst the other side remained sound; 2d, that the only part of the affected lung, in which there was an approach to healthy respiration, should be the upper lobe—the part in which tubercular matter is almost always first deposited; and 3d, that there should be so extensive a deposition of tubercular matter, without the slightest sign of any part of it being softened, as was evident from no crackling sounds being heard in any part of the chest. These proofs of the solidification of the lung not depending on tubercle, far outweighed any slight presumption, of the existence of tubercle, which might arise from the commencing emaciation, the night perspirations, and a slight hectic flush perceptible in the afternoon. Moreover, the disease was scarcely of sufficiently long standing to countenance any suspicion of tubercle being formed in sufficient quantity to cause complete solidification; for I had ascertained, at the time of her previous residence in the hospital, when she was, in the first instance, my patient, that the lungs were sound. A correct opinion on this point was the more necessary, because the administration of mercury, subsequently adopted with great benefit, would, in all probability, have greatly hastened a fatal termination if there had been tubercles in the lungs.

Neither was it probable that the solid mass in the left side of the chest was any other kind of morbid growth, for all such growths in the lungs, except tubercle, are comparatively rare; if they had existed extensively on one side, the other would probably not have been free from disease; if sufficiently large to *fill* one side of the chest, they would probably have pushed the heart out of its place (which was not the case); and if sufficiently extensive to cause universal dulness and want of respiration, they would have obliterated the bronchial tubes so completely that tubular respiration could not have been heard so distinctly as it was in this woman.

The lung, however, might have been compressed by pleuritic effusion, and in that case there would have been the dulness on percussion, and absence of respiratory murmurs, which were observed in this woman. But *tubular* respiration could be heard over the greater part of the affected side. Now, if there had been effusion so slight in extent as to allow tubular respiration to be heard at the lower parts of the chest, it must have been so limited in quantity, that, whichever part of the lung might be uppermost, according to the position of the patient, would have been distended with air, and come in contact with the ribs; and, consequently the point at which respiratory murmurs could be heard, and a moderately clear resonance obtained by percussion, would have varied as the patient changed her position. Such, however, was not the case; since, whatever the position of the patient, respiration could be heard, and a clear resonance obtained by percussion, only beneath the clavicles.

These symptoms affording conclusive proof that there was not pleuritic effusion, I need not dwell upon the absence of other signs, which would have been sufficiently evident, had there been any large quantity of fluid in the pleura.

You see, then, that the history of the case was in no way opposed to the supposition, that the febrile attack, three weeks before Muttock's admission, had been pneumonia: on the contrary, the symptoms of that attack, as far as they could be ascertained, were favourable to such a supposition. The state of constant semi-expansion of the left side of the chest, with slight movement either on inspiration or expiration; the dull sound on percussion; the absence of respiratory movements; the existence of tubular breathing in the solid parts; and the confused, muttering sound of the voice at the same parts, were all symptoms which would, of necessity, attend extensive hepatization of the lung; there was a degree of probability, amounting almost to certainty, that the solidification of the lung was not caused by tubercle, or other morbid growths; and it was quite certain that no extensive pleuritic effusion existed: on these grounds I founded my diagnosis.

It was certain, also, that the hepatization must be the red kind of that change of structure; for, if it had been of the kind in which pus, and matters which ultimately become softened and broken down, are infiltrated in the substance of the lungs, and air vesicles, there would, at this period of the disease, have been expectoration; and crackling sounds, caused by air passing through pus, and other fluids in the bronchi, &c. would have been heard distinctly.

At the time, therefore, when this patient came under my care, I had reason to believe the lung had been inflamed, and its vesicular structure temporarily destroyed by effusion of organisable matter into the parenchyma of the lungs, and the air cells, and by thickening of the walls of the latter; for I believe all these changes contribute to the solidification of the lung in such cases.

It can scarcely be necessary to say that such a state of lung ought to be remedied, if possible; for, although persons with extensive disease of this kind, may appear to enjoy good health; and, when tranquil and at rest, may not seem to suffer from chest affection, there can be no doubt they are less capable of bodily exertion than others; and the danger of even slight disease would be great, if the remaining healthy portion of the lung ever became affected. Moreover, I believe lungs thus permanently affected are more liable, than healthy lungs, under favourable circumstances for the formation of tubercular matter, to become the seat of that disease.

To promote the absorption of the effused matter which obstructed the lung, I determined to put the patient under the influence of mercury; and for that purpose ordered—Hydrarg. Iodidi gr. ij. ter die. Bleeding would have been employed had there been any signs of plethora; but the pulse, though rather quick, was small and soft; the skin was constantly moist; and at night there was said to be free perspiration. In consequence of the iodide producing irritation of the stomach and intestines, two days afterwards I substituted

Hydrarg. c. Cretâ gr. v.; Pulv. Ipecac. Comp. gr. iiss. 6tis horis.

This produced its full effect upon the mouth by the 25th, six days after the mercurial was commenced; and it was then so managed as to keep the mouth moderately tender until the 6th of May, by giving it every night, or every second night. Whilst the mercury was producing these constitutional effects, the lung was examined carefully about every other day. No change took place until two or three days after the mouth was affected; but, at my visit on the 29th of April, ten days after the mercurial treatment was commenced, and about five after the mouth became sore, improvement in the lung was first perceived. The dulness on percussion remained unchanged, and little more than tubular respiration could be heard, except at the uppermost part of the chest, where respiratory murmur had been indistinctly heard from the first. Nevertheless, it was evident that more air was entering the diseased lung than when the treatment was commenced. It is difficult to describe the sounds through which I came to this conclusion, because they could still only be called tubular; but every one who examined the chest agreed with me that more

air now entered the left lung, at each inspiration, than when the patient was admitted. The favourable change went on; and, by the 6th of May, sibilant rhonchi could be heard in several parts, especially at the lower, lateral, and axillary regions, indicating that the smaller tubes were becoming pervious to air. At the same time I thought, but it was impossible to feel certain on such a point, that a somewhat less dull sound was elicited by percussing the same parts. At this time I determined to avail myself of any power, which Iodine might possess, of promoting the absorption of the products of inflammation, and ordered—

Potassii Iodidi, gr. v.; Potassæ Bicarbonat. gr. xv. ter die ex Infus. Gentian. C.; and, to keep up the action of the mercury, Hydrarg. Iodid. gr. ij. alt. nort.

This mixture was continued until she left the hospital; the mercurial was so managed, in quantity, as just to keep the mouth tender.

The chest was examined so frequently, that slight changes could not well be noticed; but, at the period of this patient's discharge from the hospital, on the 17th of June, when no apparent change had taken place in the lung for at least a fortnight, she was in the following condition. The health and strength had improved, and much flesh had been gained since her admission. There was much greater equality between the two sides of the chest, as regards their expansion and contraction, at each inspiration and expiration. There was great increase of the resonance of the chest on percussion, at every part, especially in the subclavian, mammary, axillary, and lower lateral regions. To such an extent, indeed, had this improvement taken place in some parts, that if the left side alone had been percussed, and no comparison had been instituted between it and the right side, little notice would have been made of its dulness. And this, I may observe, is a good illustration of the necessity, in many cases, of trusting to a comparison between the two sides of the chest, rather than to the absolute dulness and indistinctness of the sounds observed on one. The sounds of respiration had improved in the same degree. The tubular sounds had vanished, except at the lower dorsal region, and at the lower part of the space between the scapula and spine; and, in its place, could be heard slight sonorous and sibilant rhonchi, and respiratory murmurs varying from very faint and indistinct vesicular respiration, to what would have appeared almost healthy, but for a comparison with the opposite side. The respirations had become natural in frequency, and there was no dyspnœa.

That this patient was in a far better condition when she left the hospital than when the treatment of her case was commenced, cannot be doubted; but it may be questioned whether the improvement was owing most to medicine, or a natural process which would have taken place under any circumstances. And this question is one of importance; for placing a person under the full influence of mercury, and keeping her slightly in that condition for four or five weeks, with little intermission, must be injurious, when not specially necessary, not only in its immediate action, but in its more remote effects. You all know that, when external parts are inflamed, and resolution takes place, the matters which have been effused into the inflamed part and surrounding cellular tissue, often remain unabsorbed for a considerable time after the inflammation has subsided, but ultimately disappear without any remedial agent being used. On the other hand, it is equally well known that they do not always disappear spontaneously; that mercury and iodine have both considerable powers of hastening their removal; and that this power is much less in the case of inflammatory products, which have been long formed, than when they are recent. When the lung is the seat of disease, its restoration to a state of health is a matter of such vast importance, that it cannot be considered safe or judicious practice to wait for the chance of a natural cure, when we are possessed of agents capable of promoting that cure, merely because their use is attended with certain minor evils; and the necessity of making use of such means early to promote a cure, is the more evident, when we consider that, if the natural cure does not take place, any delay will greatly diminish the chance of good arising from the use of remedies. If we carefully examine the case under discussion, we shall see little reason to suppose that the mercurial treatment was uncalled for, or that the patient would have regained her present state of health if left unaided by medicine. The acute stage of the disease had ceased, in all probability, a week or ten days before her admission into the hospital; the lung was as solid as it could be from hepatization; there were no symptoms of a favourable change going on in the chest; after her admission she remained some days without perceptible alteration; it was not until the system was completely under the influence of mercury, that any proof of absorption in the lungs was evident; and it was some days later before the improvement became considerable. So far, then, as one case can prove anything, we have good evidence that the treatment adopted was not only useful, but necessary.

But it is not on the evidence afforded by this case alone that I rely. I have seen

many such cases—cases in which there was good reason to believe a part of one or both lungs was hepatized, and the disease had become stationary. In these cases mercury was administered; and, when its effect on the system was manifest, then the first beneficial change began in the diseased lung. Four cases in which the lung had become extensively hepatized, and all acute disease had ceased before the patients came under my care, have been treated by myself; and I have seen others. In two of my own cases the improvement was very great; in one it was slight, and in one no change took place.

After what interval are we to abandon all hope of being able to improve the state of a hepatized lung, by the use of mercury or iodine? On this point I can give no precise information. In one case which I saw much benefited, the patient had been convalescent from the acute disease at least five weeks; but, if well assured that any consolidation, which I might discover in a lung, was the result of pneumonia, and there was no reason to fear the presence of tubercles, I should be disposed to try the effect of mercury and iodine at a much later period.

I cannot conclude my observations on this case without noticing the want of some of the signs, which you will find set down in books, as always indicating the return to a state of health when the lung has been hepatized; viz. that on the decline of the disease you hear all the stethoscopic sounds reversed, or in the contrary order to that in which they had been heard as the disease advanced; and, consequently, when the lung has nearly recovered its healthy condition, you again hear the small crepitating rattle, and may again have the characteristic expectoration of the early stage of pneumonia. This, no doubt, sometimes takes place; but, in at least one-half of the cases of recovery from hepatization, which have come under my own notice, there has been little expectoration, and very little, if any, crepitating rattle. In judging of the progress the lung is making towards recovery, I am accustomed to rely principally on the sound of tubular respiration becoming less loud, the gradual coming on of sibilant rhonchus, and both these sounds being ultimately deadened as vesicular respiration begins to be re-established. If the small crepitating rattle is heard, and tenacious expectoration comes on, after hepatization of a portion of lung, they are undoubtedly very good signs; but you must not suppose that recovery cannot be going on favourably, merely because you do not observe these symptoms.

CONTRIBUTIONS TO ANATOMY AND PHYSIOLOGY.

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[Continued from p. 281.]

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Hermaphroditism: a Memoir read to the Royal Society of Edinburgh in 1827 *and* 1828.

Part III.

The organs essentially female are, first, the ovaries; secondly, the fallopian tubes; thirdly, the uterus; fourthly, the vagina. Now of these organs we find no analogous structures, nothing corresponding to them in form or function, in the male. All the rudiments of these organs, if they ever existed, have completely disappeared in the male; but they occasionally leave traces of their influence not to be mistaken, and to which we will presently revert. The other generative organs found in females are the labia majora, labia minora, clitoris and prepuce, rudiment of the cremaster, round ligament of the uterus, broad ligament of the uterus, glands of Cowper, and gland surrounding the neck of the bladder; to these we may add, in some animals, portions of the vasa deferentia. The glands of Cowper are common to both, being also equally developed.

Most anatomists admit that, at a very early period of the female fœtus, the ovaries present an entirely different shape, and seemingly also structure, from what they afterwards assume; independent of their great comparative size and length, there is connected with them a series of vascular looking tubes, which seem to me the remains of the male testes. I have observed these tubes now for a very long period, but could not hitherto determine their nature, until accident put into my possession an anatomical preparation, proving them to be the remains or rudiments of the testes. Moreover, that the ovaria can have nothing analogous to them in the male structure may be inferred, I think, from their structure; from their occasional presence, together

with the testes, in the same individual; from their presence, when fully developed, deeply influencing the whole economy, producing a condition of the body purely female, as opposed to the male in all respects, and maintaining these differences so long as they maintain their influence; from the nature of the tube conveying the product of their secretion towards the uterus never being continuous, in any animal whose structure is known to me, with that of the ovary; from the proofs I shall have the honour of submitting to the Society, that these tubes (fallopian), appendages of the ovary, are not analogous to the vasa deferentia of males, nor convertible into them; and finally, that they almost constantly co-exist in the females of certain animals, which co-existence necessarily excludes all idea of identity*.

From the ovaria the embryo is considered as being conveyed to the uterus by a tube termed fallopian; the ovarium, moreover, is secured in its situation by the broad ligaments and by its proper ligaments. The older anatomists, who dissected chiefly the bodies of the lower animals, mistook the *vasa deferentia*, which I shall afterwards show to exist in females of the animals which ruminate, for another set of vessels connected with the ovaria, which error, with a slight modification, has extended to the present day. The discovery of the exact nature of these vessels (ducts of Malpighi) sets aside for ever all the speculations of antiquity connected with this subject.

This notion, I may further observe, of many of the ancients, that there were two tubes connected on each side with the uterus, and which they supposed to lead either to or from it, led to singular errors, and was founded on singular errors; for, at first, it was not true, anatomically, that there existed in the human structure two tubes on each side of the uterus, and which lead to or from that organ, there being but one on each side—the fallopian tube; and though we might readily excuse the more ancient anatomists, as Hippocrates, Aristotle, and Galen, in their belief of such a doctrine, and in promulgating in their works that double tubes connected with the uterus exist in woman, to which they assigned whimsical, and in some measure contradictory functions, inasmuch as these anatomists were debarred the knowledge of human anatomy, and were consequently without that steady light which the investigation of human structure hath shed over all anatomical and physiological inquiry, we cannot so overlook the gross errors, and I may almost say wilful misinterpretation of structure, which we meet with in the writings of Wharton, and many others prior and posterior to his time, who obstinately insisted on calling the ovarian ligaments uterine tubes, contrary to the evidences of their own senses, which must have taught them that they were solid bodies, unfit to perform the functions they supposed them destined to. To Wharton, and many others of his day, the anatomy of the human body was sufficiently familiar, and therefore they need not have repeated this double error, or rather heaped error upon error, as they assuredly did. The ancients saw, in those animals which they generally dissected, two tubes on each side of the uterus, and the horns of the uterus running parallel with these organs, and had no idea that they possibly could be other than female parts, found, as they were, in connection with females and female organs anatomically, and associated with them by function; for the doctrines of final causes did not teach them that parts essentially male could exist in the female body. And, moreover, having their reason perverted and twisted with foolish notions about generation, superfœtation, and the discharge of the seminal fluids from the ovaries, which they presumed to come into the vagina at a time when the external orifice of the uterus was known to be closed, they could would hardly have formed any other notion of these tubes than that they were essentially female parts*.

* It were easy to accumulate proofs: when the ovaries are removed, and during the adult stage of life, the whole character becomes altered.—See Pott. When injured in birds, there is a change of plumage.—Hunter, Le Vaillant, Yarrold, &c.

* Bauhin, speaking of the fallopian tubes, which he always calls vasa deferentia, conformably with the prevalent notions of the nature of the seminal fluids and their course, says, "vasa hæc deferentia ubi ad uteri latera pervenere utrinque dividuntur et harum pars altera brevior sed amplior in sui lateris cornu medium locove proximo implantetur; pars vero altera quæ angustior est, sed longior secundum uteri latera ad ejus cervicem utrinque inter duas tunicas fertur et infra os interius sub cervice in

Now the great error here was, first, in believing the ducts of Malpighi, as they were usually called, to lead to the ovaries, which they positively do not; and secondly, in supposing them to be present in all animals, and more especially in the human female. I cannot avoid, although it be digressing a little, pointing out in this place the mischievous tendency of presuming any thing to be true in anatomy which is absolutely opposed to the evidence of the senses, not to employ more severe language, or a harsher style of criticism: hence has arisen, I think, the evil report of physiology with many men distinguished for their liberality, for their soundness of judgment and precision, and who, from the possession of these very qualities, have raised well-founded objections to the general vagueness of physiological explanation, to the hasty deductions and ever-varying principles of physiology. But if we blame the older anatomists for their want of light and candour, touching their errors with a lenient hand, as we naturally overlook the foibles of the aged, we can hardly extend the same leniency of criticism to those who, as it were intentionally, heaped error upon error; to those who, like Wharton, not finding these ducts in the human female as they were known to exist in brutes, could yet, merely in support of their hypothesis, imagine the ovarian ligaments to be tubes; and all these ill-observed facts they connected and combined together with an ingenious sophistry, thus giving their doctrines a wonderful degree of plausibility. The female ovaries, to which they almost uniformly gave the name of testes, in consequence, chiefly, of their slight resemblance to the male preparatory organs; these organs they presume to be the secretory organs of the female seminal fluids; for they believed firmly that the fœtus was a product of a mixture of the male and female seminal fluids in the uterus, which fluids they imagined to descend by one or other of the tubes we have already spoken of.

Casper Hoffman, in his Institutiones Medicæ, as quoted by Wharton, denied that the ovaries, or, as he termed them, testes muliebres, could be compared to the male testes: his arguments are, that they are small, juiceless, and are merely the cadavera testium, and he finally refuses to them any ducts by which their product, whatever it might be, could possibly be conveyed into the interior of the uterus. What functions this learned physician, and writer on the institutes of medicine, and founder, if my memory be correct, of the physiological system taught in the Medical School of Edinburgh for nearly a hundred years, assigned to the uterus, I do not pretend to know, nor think it worth while to inquire; for, like many physicians, as well prior to as since his time, Hoffman must have written much upon pure conjecture, and without the smallest reference to exact anatomy and careful observation and experiment.

The reasonings of Wharton in discussing these doctrines of Hoffman are most ingenious, and present us with a view of a style of physiological reasoning which has not yet, I fear, been altogether abandoned. Having determined in his own mind, and contrary to the evidence of his own senses, that there are two sorts of vessels on each side, leading from the ovaries to the uterus, he finds it necessary to devise different functions for them. Admitting that nature would not employ two organs, or two instruments, in accomplishing what might be effected by one—"frustra enim sit per plura quod fieri potest per pauciora"—he goes on to state, that one ejaculatory vessel being sufficient for one ovary, it is probable that these different vessels perform different functions: "et si alterum ejaculatorium fuerit, potius alterum esse receptivum." He is forced to admit, however, that the shorter duct, viz. the ovarian ligament, which he mistook for one, does not communicate by any open orifice with the uterus; but sophistry, never without a reason, leads him to assert that this is the very structure which he anticipated, inasmuch as the same thing happens in the seminal tubes of the male, which,

prostates inseritur quæ non ita ut in viris sunt conspicuæ cum fœminarum semen non sit corpulentum: quæ semen ad tempus coitus conservant; et per hanc viam gravidæ in coitu non vero orificio uteri interiore reserato semen effundunt. (An vero hæc altera portio, a priore et vasculo uteri tubæ inserto et in uteri fundo simul junctis, producatur, hactenus non licuit observare.)

"Cum enim facta conceptione," &c.

The tubes Bauhin speaks of here, and to which he ascribes such curious functions, are, of course, the tubes now known by the names of the ducts of Malpighi, of Gœrtner, &c.

according to him, do not communicate by any direct orifice with the urethra; and thus one error led to another, and the misrepresenting the exact structure of the female organs produced a corresponding misrepresentation of those of the male. A physiological system of the growth of the fœtus flowed from all this, of an almost unparalleled absurdity; the female seminal fluids were supposed by him to distil through these tubes into the solid wall of the uterus, and there, coming in contact with the male fluids, engendered the human being. I will not comment farther upon these doctrines, fully aware that, if possible, greater errors have been committed since his day, by physiologists at least as celebrated as Thomas Wharton.

But we need not attempt to refute these doctrines by reasoning or theorising: a single fact, against which no argument can be of any avail, informs us that the fallopian tubes and vasa deferentia are found constantly together in the females of certain animals; their analogy may, for argument sake, be admitted, but I presume no one will venture to call them identical, or imagine them to be formed out of exactly the same parts.

I need not at present dwell on the precise nature of the clitoris, inasmuch as we shall discuss the matter more fully in the second part of the memoir. Laurenti called it the female penis, and to doubt its close analogy in all points with the corresponding structure in the male would be to doubt the evidence of sense. I should be sorry to bring before this Society all that has been said by anatomists and physiologists regarding its uses or functions, and its abuses: as they mistook its nature, and the reason of its being present, it could hardly be expected that they should speak rationally about it. It is a male organ, forming no part of the female economy. Not unfrequently the same organ in the male, by an accidental, though original malformation, comes to resemble almost in all respects the female clitoris. The reverse of this, together with the probable cause of its size in the yellow races of Africa, the accidental extension of the urethra through it in certain quadrumanous animals, shall be considered fully in the second part of this memoir: the opinions offered regarding its uses, and the cause of its presence, by modern physiologists, are too mean for criticism; for it will be found that they have not advanced a step since the days of Wharton, who thought that this organ, together with the greater labia, were formed "partem ad tutelem partium internarum, partem ad titilationem in coitu."

The fullest account, so far as I have been able to collect, which has been given by any of the older anatomists, as well of the structure known to them as of the theories supported by anatomists, whether contemporary or prior to his age, is given by Bauhin, whose works were published in 1621. That he stole much from Vesalius, as was the practice of all the anatomists of his time, must be admitted; but independent of this, he was obviously a very learned man, and occasionally observed for himself. In his accounts of the female parts connected with generation, he destroys all pretension for originality on the part of modern theorists as to the generative organs, and his language is so clear that it is difficult to imagine what outlets the recent promulgators of these doctrines will be able to discover in order to avoid the charge of direct plagiarism. The heading of Chap. 33 of Theatrum Anatomicum is as follows. Galen hath shewn us (De usu partium) that all the parts of men are found in women; they differ merely in position; for Galen was of opinion that a woman had all the parts that a man naturally has perchance, because as woman is first born a man (cum femina homo nata sit, page 111)—[many of the moderns have exactly reversed this doctrine, and with a greater show of reason, since the principal male generative organs are situated internally]—whatever parts are found in him ought to exist in her, and they differ only in this, that in women these parts are hid internally (Hac intus sunt conditæ), but in men are situated externally towards the perineum; and he adds, moreover, a comparison implying that they understood and had pushed analyses as far as any modern—I mean as regards the general type of all animals. He adds, Quod etiam intalparum occulis accedit. From this phrase one might suppose that they considered the female organs as rudimentary male organs, differing in situation as differing in strength of develop-

ment. I have heard the theory of Galen brought forward as a novelty, and taught in the Continental schools in 1821, with no modification, and almost in the same words; and indeed it will be found to be the basis of almost every modern theory of the generative organs, as I shall afterwards prove in the second part of this memoir.

When we carefully examine these anatomical works of Caspar Bauhin, it is quite obvious that physiological theories, or prejudices, for they do not merit much the name of theories, led to false views of structure; the observation of facts was forced to yield to hypothesis. This hypothesis of the exact analogy, or, I should rather say, identity, of the male and female parts—and so preoccupied were they with these doctrines that they even called the round ligaments, cremasters (they traced them to the knee)—flowed from a preconceived theory of the female seminal fluid, and was founded on it. Hence their names of testes muliebres, applied to the ovaria, and vasa deferentia applied to the fallopian tubes. When we read this page of Bauhin's works from which I now quote, one might almost imagine they were perusing a portion of a modern continental work. He compares the uterus to the scrotum—"Uterus vero scroto virili a Galeno assimilatur quasi scrotum uterus sit inversus ab ossibus pubis propendens; et sic scrotum et uterum solo situ ab inversione distare censet." He goes on to state, "and thus if you imagine the inverted scrotum to be thrust as it were betwixt the urinary bladder and rectum, what was formerly scrotum may now be termed uterus—(quod antea scrotum erat nunc uteri rationem obtinebit.") He next compares the vagina to the penis, and seems to consider all these organs as essentially the same. "Uteri vero collum loco penis erit, cum collum et penis idem sint longitudine frictione et refrictione ab iisdem in eundem ductum semen effundetur." He admits, however, that they differ in situation, as being internal in women, external in man; which distinction as to situation was, so far as I remember in the modern discourse I have heard on this subject, nearly the only difference allowed to exist between organs whose actual functions are diametrically opposed to each other. But these, he says, are mostly Galen's notions, whereas he himself would rather compare the vagina to the neck of the scrotum: (Collum uteri collo scroti respondere, et peni virili, penem muliebrem quem clitoridem vocunt.) Fallopius, following in the same field of observation, had other views; for inasmuch as the highest problem which can possibly be solved by the human mind is the theory of generation, the most mysterious of all vital processes, so the organ, or immediate instruments by which a living being may be called into existence has naturally at all times deeply engaged the attention of the philosophic world. Fallopius, whose anatomical discoveries well entitled him to theorise, compared the female uterus to the male penis, the body of the uterus to the glans, the vagina to the body of the penis, assigning as a reason, "Natura masculos similiter ac fœminas iisdem organis prædítos esse voluerit, ut sibi penitus similes generare possint." To the male and female fœtus he assigns, in their embryo state, the same parts, (eodem membra): and whether the fœtus were to prove male or female depended on the greater or less degree of heat, (pro majore vel minore calore): and so when by the great force of heat, these parts protruded, the fœtus proved male, but by the deficiency in the heat the parts remained within the body, enclosed, as it were, in the trunk, the child proved female. I greatly wonder how so sensible a man as Fallopius could forget in his theory the obvious resemblance, almost identity, of structure, situation, blood-vessels, connexions, that exist between the clitoris and penis, allowing his views to be perverted and twisted by false views of the animal œconomy. He mistook, also, the circulation of the blood, though he discovered the valves of the veins, and knew all the facts regarding it, and so missed an immortal fame. I think his notions about the less degree of heat in females and female parts is not supported by modern experience. The most modern doctrine, and that most extensively admitted, teaches that all embryos are female. These doctrines, then, tacitly avow the male to be a more perfect animal, inasmuch as the non-development of male organs would leave the embryo of its original female sex. The ancients said that

this was effected by the greater heat, and this is the only difference I can discover between the doctrines of Galen and the ancient anatomists, and the more cautiously expressed theories of Meckel and of other modern physiologists. But in speaking of the older anatomists I ought not to include all, for amongst them there were obviously men such as Laurentius, who, possessing either less genius or imaginative powers, asserted the genital organs of both sexes to differ greatly from each other both in situation, and structure, and number.

On this supposed want of heat in the female the older anatomists explained everything: they had laid down a principle which, right or wrong, like the modern doctrine of "formations arrêtées," they applied on all occasions. This want of heat, this coldness of females, explained why the ovaria remained within the body, and were smaller; why they have no epidydymis; why the prostate scarcely exists in females; why the spermatic blood-vessels are shorter, &c.

It must be admitted that Bartholin's notions of the presence of male organs in female structure must have been somewhat more rational than certain of his contemporaries. He speaks of a prostate in women, but did not mistake the uterus for it, as Meckel has done: he looked for it where, without doubt, he would have found it, had it existed, namely, betwixt the female urethra and anterior surface of the vagina.

But I perceive that the discussing these points further in this part of the memoir will lead directly to the nature and causes of hermaphroditism, the theories regarding which I propose discussing in the second part of this essay: enough has been said here to show that in discussing the modern doctrines of hermaphroditism we shall not be considering novelties, but rather opinions coeval with the earliest period of philosophical anatomy.

Having shewn, in the first section of this memoir, that there may exist in females of any animal, organs which in their character are essentially male, though they be not called to perform any particular function, but are present simply, as shall be more fully explained, by a law affecting the type of the generative organs, let us now consider this subject more in its details, and endeavour to determine, in as far as we can, if any organs essentially of a female character exist in the male structure, and thus lay the foundation for a rational physiology of these organs, and which shall explain why they are present, and how they may be absent, without any reference whatever to the doctrine of final causes, general analogy of living beings, imperfect development of parts, or to any other doctrine, physical or metaphysical, which has been proposed. That such an inquiry is necessary, no one who is acquainted with the reasons assigned by physiologists for the presence of certain organs in the males and females of animals, will venture to doubt; neither will any one who has reflected on the uses assigned by almost all physiologists and anatomists to these organs; sporting opinions regarding structure, which, without employing a harsher style of criticism, may be declared to be too mean for notice. The most approved modern works consider the clitoris as an organ almost exclusively calculated for pleasure, which, together with most other opinions regarding the uses of organs contained in most modern physiological works, I feel inclined to consider as inferior in rationality to the notions of Riollan about the uses of the rudimentary mammæ upon the male breast, his opinion being that they were placed there that woman might not boast of the superb organs which nature had bestowed upon her*.

* The highly philosophical M'Cullagh has remarked that in explaining the phenomena of nature, the rabble fly at once to final causes. But so do the Oxford philosophers and geologists. A curious but not singular instance of the accuracy of Dr. M'Cullagh's remark, I met with in travelling between Biggar and Edinburgh, which it may not be out of place to relate. The driver of the chaise, also its proprietor, in which I travelled, asked my permission to give a ride for a few miles to a very decent-looking woman, who seemed, and in fact turned out to be, the wife of a small tradesman, but in good circumstances. The lady was garrulous, and my driver (a married man) inquisitive: she soon entered on her family history, during which we learned that although she had been married for about four years, she had not yet been blessed or cursed with any family; but what was more extraordinary, she had a brother, to whom nature had denied all vestige of the male organs. And on my driver asking what she thought might be the cause of so strange an occurrence, she replied unhesitatingly, that it was clearly an interposition of a special providence, in order that somebody might be left at home to look after their aged mother!

In our endeavours to determine the organs which are essentially male, which in fact constitute the sex in him, the first place in importance must assuredly be assigned to the testes, which have nothing strictly analogous to them in the female: some, indeed, have ventured to say that the ovaries are the analogous organs to the testes, and some have even gone farther, and asserted that originally in the embryo there exist but one organ, and one tube leading from it, and these are convertible into either testis or ovary, and vas deferens or fallopian tube, according to the determination of the sex; and this opinion, which at the present moment seems to prevail with almost all the great anatomists of the present day, is of vast antiquity, and yet there is no foundation for it, but the most positive and direct proofs of the contrary drawn from anatomy and physiology; proofs which, I trust, when fully submitted to the society, will readily convince every one that the testes never yet under any circumstances were changed into ovaries, nor the vasa deferentia into fallopian tubes. To proceed, then, with the determination of the organs, we shall consider the testes and vasa deferentia, vesiculæ seminales, and prostate gland, as essentially male, as having nothing at all analogous to them in the female naturally; and therefore if all, or any part, be found to exist in her, it must be considered as the remains of the male structure, in no shape necessary for the performance of her functions, but accidentally present from circumstances which shall be more fully explained hereafter. In man, moreover, we have, in addition to these structures, all that portion of the urethra which is anterior to the membranous part, which, together with the penis or corpus cavernosum, and corpus vasculosum urethræ, are parts exclusively male wherever found, whether in male or female, that portion of the urethra which is behind the membranous part leading to the bladder being common to the male and female. Now I may mention, though in a dogmatic way, reserving the proofs till I come to speak of the female organs, that we find nothing analogous to the seminal vesicles, prostate gland, or ductus ejaculatorii, in the female of most animals, and when we do find them, as no doubt in certain female animals a part of these would seem to exist, we are warranted in considering them male organs accidentally present. Now, in addition to these, we find, moreover, in the male of many animals, certain organs which are unequivocally female; such are the mammæ, which are placed on the human breast: the history of these organs, and the physiology assigned to them, is an exceedingly curious subject; large in some males, small in others; they have been known even to secrete a fluid. They contain milk in most very young children. Wherever found they are essentially female organs. Anatomists have been anxious at all times, and in all ages, to point out in male and female what they considered analogous organs, and accordingly the rudimentary mammæ on the male breast could hardly escape their notice; they seem indeed, to have considered them as essential to male structure, inasmuch as we find them devising reasons for their presence, ascribing it to analogy, which, if it imply anything, implies a theory, or assigning to them more positive uses, such as that of ornamenting the breast, cherishing the heart, and keeping it warm, and other prodigious absurdities of this kind. Riolan's notion after all is perhaps the best: "ne mulier superbum animal gloriaretur se mammas habere, quas natura viris denegasset." —Anthrop. lib. 2, 3, p. 208.

Previous to birth the testes are lodged in the abdominal cavity: now we find leading from them to the scrotum, a whitish fibrous-looking cord, to which Mr. Hunter gave the name, and assigned the duties, of a gubernaculum, or a regulator of the testes. I have often thought this structure might be the remains of a female organ, viz. a portion of the round ligament; the female apparatus not having at this early period of the growth of the fœtus entirely disappeared. M. Carus considers the round ligaments as analogous to the gubernaculum. But I throw out this as a mere conjecture or theory, and not by any means as having been confirmed by actual dissection. The cremaster is a male organ; in those cases in the human structure in which the testes does not descend into the scrotum, and which we know sometimes to be the case, in cases in which

they are obviously imperfectly developed, we find that then there is no cremaster present, or at the most a single fasciculus or two of pale muscular fibres: thus, then, the descent of the testes into the scrotum in these animals in whom by a law of their nature they ought to descend, is somehow or other connected with the presence of the cremaster: if the organ does not appear in its proper place, the cremaster does not seem to form, but these effects may be concomitant, merely the general result of a common cause acting on, and influencing both. In one case examined by me, of a person about thirty years of age, the testis of the right side had not descended; from it there proceeded downwards into the pelvis a vas deferens seemingly well formed, whose course was to the fundus of the bladder, where we found two vesiculæ seminales equal in bulk to each other, and a prostate gland of the usual size: as the vas deferens of the right side was crossing the brim of the pelvis there proceeded upwards towards the deep inguinal ring, following that course which the vas deferens usually takes, a cord seemingly composed of cellular fibres, together with a few blood-vessels. A thin cord proceeded outwards, passing by the deep ring into the inguinal canal, following the course of that canal as far as the external abdominal aperture, and was there lost in the surrounding cellular membrane: a few pale delicate looking muscular fibres were found in the inguinal canal, following the usual course of the cremaster. Notwithstanding what has been said of the rudiment of cremaster muscle in females, I consider this muscular apparatus as being distinctly male; and even were it proved to be present in all females, which is not the case, this would in no shape alter my opinion; neither do I consider the prostate gland or seminal vesicles as having any representative or analogous structure amongst the female parts. With the exception of Bartolini's views as to the nature of the mucous glands placed betwixt the superior surface of the vagina and urinary bladder, no one has pretended even to shew any structure resembling the prostate in the female, and if the seminal vesicles do exist, as they are known to do, though in a rudimentary state, in some female pachydermatous and ruminating animals, they are, as we shall afterwards shew, rudimentary male organs, existing in the female. The penis is strictly a male organ, though found in a rudimentary state in all women, I presume, and in the females of most animals: though in most males it serve the purpose of a canal for the discharge of urine, it is yet in some animals seemingly exclusively intended as a generative organ, performing one function only. I consider, then, the organ as exclusively generative in this sense in all male animals in whom it is present, and include therefore all that portion of the urethra and its corpus spongiosum extending from the bulb to the glans inclusive. A deficiency in any portion of the canal is generally said to be an approach to hermaphrodism: it certainly indicates a deficiency in the development of the male organs. The doctrine then is this: the organs I have designated to be male are essentially male organs wherever found; they do not, when transferred to the other sex, take on the action of other organs, they perform no specific function there, nor are changed into any other structure, and thus called on to perform other functions if transferred to the other sex, as they sometimes undoubtedly are: we never find them converted into other organs; the testes will never become ovaries, notwithstanding the assertion of many eminent anatomists of ancient and modern times, nor are the vasa deferentia convertible into fallopian tubes, seeing that they co-exist in females of the ruminating and pachydermatous animals.

When male organs, therefore, are found in females, they shew an approach to hermaphrodism in the individual, trivial and ineffectual if the organs present be merely in sections or in parts, and still more so if they happen to be unimportant organs; but singular in the result, should the organs present happen to be the testes, the animal may then be found to rise through the various shades of double sex to hermaphrodism nearly if not complete.

REMARKS
ON THE
IMPUNITY OF CERTAIN ATTEMPTS TO MURDER,
AND THE GROUNDS OF THAT IMPUNITY.

To the Editor of the Medical Gazette.

Sir,

The following remarks were in great part drawn up with a view to a future edition of a work published by me in 1838, entitled "Elements of the Pathology of the Human Mind," of which they might form a chapter. I should not have thought them worthy of being laid before the public in their isolated form, but for the peculiar circumstances of the practical question to which they relate. An intention has been expressed by the highest legal authority in Great Britain to review this important subject, and to frame, if it seem good to him, some legislative measure in relation to it. It appears reasonable that all possible data should be accumulated for such a consideration; and, under this impression, I have thought it not inexpedient to offer to you this contribution, when, however small its importance, it may be of most use.—I am, sir,

Your obedient servant,

Thomas Mayo.

56, Wimpole Street,
Nov. 15, 1843.

"A child is born in the garrets of St. Giles's, the offspring of a prostitute and a thief. He receives a suitable education, and he adopts his father's profession. After following it with assiduity and success, he is arrested in the course of it, and tried for his life. His early habits are ascertained on unquestionable evidence; but do these considerations soften the rigour of the law, by placing him before the public as an irresponsible being, the creature of circumstances over which he had no control? By no means; in one respect they tend to insure his condemnation, namely, in making his deliberate performance of the criminal act more probable. Finally, this person is hanged or transported, according to the nature of his offence. And it is probably very fit that he should be so treated. I do not object to the decision of the law in the case which I am supposing, provided a consistent view is taken of certain other cases in relation to the plea of irresponsibility*."

It is clear that we do not test the liability to punishment of the above offender by his presumed moral responsibleness, but by some other criterion; and this criterion I will at once assume is furnished by the question, whether punishment in the supposed case will, or will not, prevent a repetition of the offence?

Now, the above remarks have an important bearing on the subject of mental unsoundness, viewed in its relation to delinquency. Certainly the burthen of proof rests with him who impugns the position, that the same criterion should be applied to the acts of a maniacal offender; so that the exculpation founded on presumed irresponsibility, which is denied to the sound in mind, should be equally denied to the unsound. I will therefore at present assume, that the liability to punishment of both parties must be determined in reference to the question, whether punishment will prevent a repetition of the offence? Those who would deal with the unsound in mind, irrespectively of this criterion, as being irresponsible agents, must, in parity of reasoning, exculpate and set at large the thief or murderer, whom we have above described.

In truth, the tendency which has unconsciously operated on the public mind to disregard the community of principle on which the sane and the insane may, in many respects, be dealt with, had largely contributed to that moral mismanagement of the insane, which many wise and humane persons are, in the present day, carefully endeavouring to obviate in the regulation of establishments for their relief. The mental affections under which they are labouring do not prevent their being influenced in a high degree by a sense of right, by fear of consequences, by gratitude, and by a well-modified love of praise.

It is perhaps needless to say, that the prevention alluded to in this inquiry is general, not particular: in other words, that it is applicable to all members of the community, and not peculiarly or principally to the delinquent punished.

* The above passage constituted part of an article contributed by the author to the first number of the London Review, formerly edited by the Rev. Blanco White.

What, then, are those states of the unsound in mind, for which, and under which, they must be held unamenable to punishment for offences against society, on the ground that their punishment will not prevent the occurrence of a similar offence?

We are informed by the highest authority of the land, the Lord Chancellor, that the actual law, in reference to the greatest offence, the crime of murder, is that pronounced by Judge Leblanc. "It is for you to determine," says Mr. Leblanc to the jury, in a case of attempt at murder, "whether the prisoner, when he committed the offence with which he stands charged, was or was not capable of distinguishing right from wrong? whether he was under an illusion with respect to the prosecutor, which rendered his mind insensible of the nature of the act he was about to commit, since in that case he will not be legally responsible for his conduct? On the other hand, provided you shall be of opinion that when he committed the offence he was capable of distinguishing right from wrong, and not under such an illusion as disabled him from distinguishing that he was doing a wrong act, he would be answerable to the justice of his country, and guilty in the eye of the law." Such, no doubt, as sanctioned by the Lord Chancellor, with reference to the opinion also of other judges, is the law of the land. The utter vagueness of the criterion, "knowing right from wrong," has been exposed by able writers, and by none more ably than the author of an article on the trial of Macnaghten, in the 77th number of the Westminster Review; though perhaps that author somewhat magnifies the absurdities to which it might have been presumed to lead, in parity of reasoning, such as exculpating Guy Faux and Ravaillac; for he overlooks the fact, that the ignorance which is regarded as exculpatory, is presumed to be the result of a maniacal delusion. Yet, modified in this way, it is still a perilous doctrine, which regards ignorance of right and wrong a ground of impunity. If justice be the plea on which such ignorance is to confer such exemption, the supposed case with which I have commenced this essay stands full in the way, as it would claim, by parity of reasoning, equal exemption;—if it be presumed that punishments inflicted under these circumstances will be non-preventive, we are met by the fact, that the insane are largely subject to influence from fear.

The expressions by which the present Lord Chancellor, in the case of *Rex* v. *Offord*, seemed disposed to construe *that* ignorance of right and wrong which should privilege the insane delinquent, afford a definite and intelligible modification of the above criterion. The expressions to which I advert, as used by Lord Lyndhurst, were adduced by the Attorney-General in the prosecution of Macnaghten; and it is perhaps to be regretted that they did not receive further enforcement from him, and from the learned judge before whom the cause was tried. The whole passage we give in the Appendix. (See No. 1, p. 304.) I would call my reader's attention to that part in which his lordship recommends that the plea of mental unsoundness should not avail, if the prisoner knew, at the time when he committed the act, what its effect would be in reference to the crime of murder. Now the converse of this proposition, that such ignorance, namely, as is there supposed of the act in reference to law, ought to avail as exculpatory of a delinquent under a plea of insanity, constitutes, I believe, a ground of considerable space, and adequate to contain a large proportion of the cases requiring such exculpation. The punishment of an insane person, whose insanity has proceeded to this point, can in no degree answer the intention of punishment. It cannot prevent a repetition of the offence, for it will not be appreciated by the persons whom it is supposed to influence. Meanwhile, this description will embrace all the mass of cases which fall under the name of delirium; cases well recognised, indeed, in practice, but not easily fixed by definition. Again, it will embrace all such acts as, springing out of an insane delusion, would be justifiable if that delusive impression were founded in reality. Thus a person insanely imagining his own life the object of a conspiracy, and killing another person, under circumstances which the law would warrant as constituting an act of self-defence, if the conspiracy were real, would be protected by the above plea against penal

consequences. The prior delusion of the offender involves, in this instance, an ignorance of the criminal nature of the act. We will put this case thus: A. considers himself the object of a conspiracy, and B. one of the conspirators. He meets B. in a solitary place by night: his fears are roused under influence of his delusion, and he puts B. to death in presumed self-defence.

In these cases, it will be observed, there is a presumed state of mental unsoundness in relation to the offence at the moment of its commission. Now this is, in truth, the principle embodied in the expressions of Lord Lyndhurst, to which I have alluded; protective, indeed, of the interests both of the public and of the insane offender. He whose insanity incapacitates him from recognising the nature of his offence, in reference to the laws of his country, is under the immediate pressure of that state in relation to that offence. The punishment of acts not merely resulting from, but performed under insanity, *i. e.* under false perceptions or delirium, will in no case constitute a preventive example.

If I am asked why I limit the impunity conferred by insanity to actions performed under its presence, and do not extend it to actions springing out of insanity, I answer, it is quite certain, in the first case, that the agent has no control over himself; and this complete certainty would make his punishment unpreventive: in the other case, no such certainty exists, and we habitually deal with classes of offenders who appear even more unable to control themselves, as if they *were* possessed of self-control; and we find such punishments preventive of crime, and protective of society.

The distinction which I am endeavouring to illustrate, with a view to judicial proceedings, is one habitually carried out in the management of the insane. Every experienced manager of an establishment knows, in most cases, when his patient is actuated immediately by the disease, and when his mind is proceeding normally. He occasions the patient to regulate, in some degree, his own aberrations by the use of his reason.

It is, however, conceivable that the insane person, whose delinquency is in question, may not be obviously unaware of the fact, that the act which he is preparing to commit is contrary to the law of the land; he may comprehend its nature in relation to law, yet still, in applying the great principle to which this consideration is subservient, we may be compelled to admit that the offender, in the case supposed, is not a legitimate and fit object of punishment; that he is not one whose act the threat of punishment could have prevented in *him*, or the example of whose punishment could deter others similarly situated. Such is oftentimes, in respect to the offence, the unhappy parent, whom a morbid impression impels to murder; who asks, perhaps, to be manacled and confined, lest she should obey this impulse, and slay her beloved child. (See Appendix, No. 2, p. 304.) Again, the attached and faithful subject and soldier, who is led by an irresistible impulse to shoot at his commander and sovereign. In these cases, as in that previously considered, in which the offender is presumed ignorant of the nature of his act in reference to law, there is a mental impression, pathologically of an insane kind, and also placed beside or beyond any influence from threatened or prospective punishment. Hadfield himself apparently shot at the king *with a view to being capitally punished for it.*

In cases such as these, the insane state not only has led to the delinquency, but also, pervading the whole character of the delinquent, has abolished for the time those principles which, in a normal state, would offer resistance to an illegal act, whether suggested by a real cause or by a delusion; thus making death by the hand of an executioner, in the one case, and the murder of a beloved child, in the other, an object of desire.

But eminent authors, such as M. Georget and Dr. Prichard, are of opinion that the plea of insanity may comprehend that class of persons who are termed monomaniacs, so as to render *them* also irresponsible*, or unfit

* I entirely assent to Dr. Prichard's opinion, that perfect soundness in other points is not compatible with the presence of monomania. But I do not imagine that the law either does contemplate, or ought to contemplate, this as conferring general irresponsibility. In truth, the extent of eccentricity which may render the subject of it deserving of medical attention and management, does not necessarily exclude that degree of self-control which the fear of punishment calls into action. Surely the public interest requires that a person should be amenable to penal law for those aberrations for which he could not be confined or coerced as insane, without an infringement of his just rights.

subjects for punishment. "The conclusion which M. Georget arrives at," says Dr. Prichard, who agrees with him, "is as follows:—Partial insanity, or monomania, excludes the idea of culpability or criminality, and takes away from the affected person all responsibility for his actions, whatever may be the extent or nature of the delusion under which he may labour." We must apply to the opinions of these gentlemen the criteria above adverted to, namely, the question of justice, and the question of preventiveness of punishment as inflicted for the supposed delinquency. The irresponsibility of the monomaniac on the first of these grounds, that of justice, is disposed of by the precedent with which our essay has commenced. The person who can reason upon his crime, who can devise systematic means for accomplishing it, who can form and weigh opinions respecting his chances of escape, who can conduct the ordinary business of life, can take care of his property, that man cannot, consistently with justice, be made less responsible morally for his actions, than the unhappy offspring of the prostitute and thief, whom we there supposed. With respect to the other criterion, the question, namely, whether his punishment (the punishment of the monomaniac) will be preventive, the burthen of disproof must rest with those who venture to undertake a denial of this supposition.

Let us now consider, in relation to these principles, and in illustration of them, the important case which has given occasion to the public anxiety on the whole subject; I mean the case of Macnaghten. In the first place, no proof was offered, or, I presume, could have been offered, that he was not cognizant of the nature of his act, in reference to the laws. Neither, allowing him the benefit of of a pre-existent delusion, could he have construed the circumstances under which he performed the fatal act as affording grounds for it on the plea of self-defence under an immediate attack. These grounds excluded, what other grounds were there for supposing that his punishment might not deter similar offenders, or that the apprehension of punishment would not have deterred him? Was his insanity, in relation to the act committed, analogous to that of Hadfield, or the infanticide mother? Did it subvert or run counter to the ordinary workings of the human mind, or was it not rather in strict unison with them? If, as I believe to have been the case, he was a monomaniac, if he had one set of morbid associations of thought, he was not therefore, *primâ facie*, incapable of learning, or of teaching others, by the example of his punishment, that a strong desire of vengeance, or, if you please, of prevention of mischief, must not be gratified in defiance to the laws of the country. To say that he was incapable of making these distinctions would be to assign to him a pathological state of which no evidence was adduced. He must have been a maniac, not a monomaniac.

APPENDIX.

1. In this case the prisoner was indicted for the attempt to murder a person of the name of Chisnall, by shooting him with a gun. It appeared that the prisoner laboured under a notion that the inhabitants of Hadleigh, and particularly Chisnall, the deceased, were continually issuing warrants against him for the privation of his liberty and life. Several medical witnesses deposed to their belief that, from the evidence which they heard, the prisoner laboured under that species of insanity called monomania, and that he committed the act while labouring under the influence of this disorder. Lord Lyndhurst, who tried the cause, in summing up told the jury, that "they must be satisfied, before they could acquit the prisoner, *that he did not know, when he committed the act, what its effect, if fatal, would be with reference to the crime of murder.* The question was, did he know that he was committing an offence against the laws of God and nature*?" The expression in italics I presume to accept as Lord Lyndhurst's practical application of the latter question, which is another expression of the vague criterion of our law, the knowing right from wrong.

2. We might refer our readers to a case recorded in Rivington's Annual Register for 1822, p. 97, as a painfully good specimen of this form of insanity. A young married woman comes into a neighbour's house at 11 o'clock in the morning, and in a delirious manner,

* *Times* newspaper—Trial of Macnaghten.

with wild gesticulations, asserts that she has cut off her child's head, in order that she may be hanged. She had previously been in good health. For this act she is tried, and very properly acquitted, on the plea of insanity. It appeared that she was perfectly sober, had had no quarrel or difference with her family, was an affectionate mother, and was at the time anxiously trying to nurse this child, to the detriment of her own strength.

This most strange form of aberration seems in many instances connected with a perverse habit, which education might possibly do something to prevent. All must be conscious of a defect of mind, which, in some *sane* persons, exists in a very high degree, and which may form the starting point of an aberration, namely, the strong nervous inclination to perform some act which the agent at the same moment regards with the deepest horror: to jump down from a precipice, &c. This *small* insanity is not undeserving of attention in early life, if only for the sake of more important forms of the morbid tendency, to which it may lead.

[To be continued.]

DIGITALIS IN EPILEPSY.

To the Editor of the Medical Gazette.

Sir,

In the work published by me in 1841, in which I detailed some cases illustrative of the efficacy of digitalis in large doses in idiopathic epilepsy, I incidentally hinted that probably in mania, and more especially when complicated with the former disease, the same medicine administered in the same way would be found to exercise a very decided influence. To this opinion I was led principally by a very striking case, related at page 23 of that work, in which a perfect cure of the two-fold disease followed the administration of the heroic dose during a maniacal paroxysm. Having lately met with several cases strongly confirmatory of the correctness of this view, shewing likewise the safety of this medicine in doses much larger than those usually given, I am induced to present them to the profession.

Case I.—A young woman, æt. 27, in whom epilepsy had existed from an early childhood in the idiopathic form, was frequently attacked by mania after the fits, and in some instances mania took the place of the primary disease. The fits were generally preceded by an aura; premonitory sensations being felt sometimes for days previous. After enjoying an unusually long respite, she was attacked by mania on the third of October. She remained sleepless for three days and nights, and talked incessantly. Her bowels were open; her pulse above 100. She had taken neither food nor drink for the three days. I gave her on the third day ʒij. of Tinct. Digital. prepared from the fresh leaf. On that night she slept soundly, awoke composed, and made a hearty breakfast. Her pulse continued regular, of good strength (108). On the next day her pulse was 100, and she was more tranquil. In a day or two she recovered her wonted serenity.

The next case occurred in the general hospital here, and I am indebted to the kindness of my friend, Dr. Jones, for the opportunity of trying the remedy.

Case II.—A man, æt. 60, a musician, seven years epileptic. Cause not assigned; disease not hereditary; temperate; no previous treatment.

Present state.—August 20, 1843.—His fits occur at uncertain intervals; is seldom more than three days free; has sometimes several in one day. Fits are generally preceded by flightiness of manner. Is more liable to them when constipated. Was at first subject to violent headache, not so at present. Maniacal fits, so violent as to require restraint, frequently alternate with the epileptic. Memory impaired; enunciation embarrassed; attacks sometimes accompanied by a cordiness of temporal arteries, and a tightness and fulness felt in the head.

Sumat. ʒj. Tr. Digital. ter in die.

23d.—Tr. Dig. omitted on 22d, on account of constipation; resumed today; pulse 88.

25th.—Smart vomiting; bowels slightly affected; pulse 64, regular.

Omit. Digit.

26th.—Had two fits this morning.

28th.—Violent delirium; bowels open.

Sum. stat. Tr. Digital. ʒij.

Pulse being 92, small and soft; but temporal arteries developed; face and

head warm and perspiring. In four hours he was quieter; pulse 96, and took ʒj. Tr. Dig.

29th.—Tranquil; slept well; skin perspirable; no vomiting; bowels confined: pulse 80.

30th.—Smart vomiting yesterday; bowels opened by purgative medicine. Is rational; pulse 96.

Sept. 2d.—Maniacal fit last night, for which restraint was used. Had an epileptic fit this morning. Is now quiet and rational; pulse 96; bowels free.

3d.—Another maniacal attack last night; tranquil at present, though not quite collected; pulse 80.

6th.—Being rather excited this night, and pulse 92, had Tr. Digit. ʒij.

7th.—Maniacal tendency still continues; pulse 84; no vomiting.

St. statim. Tr. Digit. ʒij.

8th.—Tranquil; pulse regular; slept.

9th.—Tranquil; pulse 84, regular.

10th.—Maniacal tendency; pulse 96.

St. stat. Tr. Digit. ʒiij.

11th.—Slept well; after a hearty breakfast had a severe fit of vomiting; pulse 96, regular.

12th.—Pulse 84, slightly irregular; vomited again.

13th.—Tranquil; marked intermission of pulse.

14th.—Tranquil; intermission less; pulse 74 to 84.

17th.—Maniacal tendency; pulse 84, regular, and rather cordy.

St. statim. Tr. Digit. ʒiij.

18th.—Quiet night; pulse 92, slightly irregular, but not intermitting. No vomiting.

21st.—Pulse 84, with very marked intermission.

23d.—Look wild; pulse 102; bowels constipated.

Statum. Pil. Purg.

24th.—Bowels open; tranquil; pulse 76, still intermittent.

25th.—A severe fit at half-past 4 A.M.

Sumat. stat. Tinct. Digit. ʒss.

9 A.M.—Pulse 72. Half-past 5 P.M.—Qualmish, but no vomiting; pulse 61 to 64, intermittent.

26th.—Vomited a great deal in night. Is now (half-past 9 A.M.) sleeping. Pulse 60, regular; slight hiccup.

27th.—Tranquil. Vomiting stopped; bowels confined; pulse 88 to 92.

Pil. Purg.

28th.—Tranquil, but weak; pulse 78 to 80, cordy.

29th.—Pulse irregular still.

Oct. 2d.—Pulse 90, regular.

3d.—Talkative in night; manner excited; pulse 90, regular.

5th.—Has had six fits since last report; pulse 92, regular. Is rational.

Sumat. statim. Tr. Dig. ʒiv. (½-past 9, A.M.)

6th.—Vomited a little; pulse 108, regular; rather stupid, but rational.

7th.—Is quiet. Pulse 64, intermittent.

9th.—In the night of 7th, being rather excited, got Tr. Dig. ʒij. Quiet since. Pulse 98, slightly irregular.

Had a fit on 11th.

Between this date and the 3d inst. he took six draughts of Tr. Digit. of ij. each, and had no fit.

From 24th to 26th Oct. he was delirious, constantly catching at imaginary objects in the air; but was tranquillized by two draughts containing ʒij. of the Tinct.

I have detailed this case at considerable length, and would remark, that both cases tend to show (as I have already endeavoured to prove in my essay) that, when digitalis is administered in sufficiently large doses, the stage of excitement becomes, as it were, evanescent, and the medicine acts, to all intents and purposes, as a direct sedative, and this even in cases where a confined state of bowels exists; contrary to the opinion of Dr. Halloran, who asserts that in this case it is a stimulant. It is, no doubt, desirable, but *not indispensable*, that they should be open; which it is well to know, in those cases where, in order to avoid the sad alternative of coercion, speedy relief is necessary, and where time could not be afforded for the operation of a purgative. I cannot but express the hope that physicians of lunatic asylums, and other establishments presenting extensive opportunities of testing these views, may be induced to do so, as it would be an inestimable boon conferred on the unhappy class of beings to whose relief they minister, if any so easy means should prove a safe and efficacious substitute for circular swings and strait-jackets. Dr. Holland, in his Medical Notes and Reflections, states his opinion, "that one cause of the frequent failure of digitalis is its too timid administration;" and I must

say, that from these, as well as from many other cases which have come under my observation, I am more and more confirmed in the opinion which I formerly advanced, that epilepsy and epileptic mania, in obedience, it would seem, to a general law of disease, confer a tolerance of an appropriate remedy in doses which would be dangerous under other circumstances; and, in cases where the heroic dose is inadmissible, admit frequently of palliation by the administration of digitalis in doses hitherto little dreamed of in practice. It is quite certain that in the second case here recorded the digitalis repeatedly, and with certainty, controlled the maniacal tendency, which, in this case, was generally attended by more or less vascular excitement; while in the first case, in which no such concomitant symptom was found, its action seemed no less prompt and beneficial. It is likewise worthy of note, that the characteristic effects of the medicine on the circulation seemed to follow its sedative effect at an interval of 24 or 48 hours.

The subject of the second case has been taking regularly, since the 8th inst. Tr. Digital.—Spt. Tereb. aa. ʒj. morning and evening. His pulse today is 72, and regular. He continues perfectly tranquil.—I am, sir,

Your obedient servant,

EDMUND SHARKEY, M.D.

1, Winchester Place, St. Helier's, Jersey.
Nov. 14, 1843.

FIBRINOUS DIARRHŒA, OR DIARRHŒA TUBULARIS OF DR. GOOD.

BY JOHN GRANTHAM.

(For the London Medical Gazette.)

THIS disease is of rare occurrence, and of a most unmanageable kind, assuming, in the generality of cases, a chronic character. Dr. Golding Bird, in the Guy's Hospital Reports, says, "It is probable that the follicles are the principal seat of the disease; for we know that they sometimes secrete a dense mucus, differing little in its physical qualities from coagulated albumen, or even fibrin; and the researches of modern chemistry go far towards shewing, not only the close connection, if not identity, between fibrin and albumen, but also that the formation of mucus requires little more than the addition of saline matter to albumen in a state of minute subdivision; and conversely, that the withholding of the saline particles may cause a secretion of albumen instead of mucus."

In the cases that have come under my notice, the discharges from the intestines have assumed, in the first stages of the complaint, a mucous appearance; secondly, a mixed mucofibrinous character; and lastly, the evacuations have contained true fibrine. The evacuations of fibrine have been preceded by long-continued pain in the abdomen, and great irregularity in the temperature of the skin; highly sensitive to a damp atmosphere, causing spasmodic pains in the abdomen. When the epithelium covering the fauces and posterior nares is implicated in the disease, the patient suffers much from violent pain in the head, referrible to the region of the parietal bones, with extreme irritability of mind. There is a great tendency to acidity of the stomach, which is increased under the use of a liquid diet. The abdominal pains are always of a spasmodic character, and at times very acute, extending to the neck of the bladder and down the inner part of the thigh. The tongue assumes a white appearance, with indentations round the edges; sometimes ulceration of a phagedenic kind forms over the tonsil glands. The pulse is seldom altered, generally maintaining a steady healthy feel; the skin is often studded with numerous papillæ, especially over the chest, neck, and face; the urine denotes an anæmic condition of the kidneys. Occasionally such patients pass urine with evident traces of albumen, seldom containing a normal quantity of the phosphates. On an increase of fever or mental excitement, a larger quantity than natural of the lithate of ammonia is found; frequently the mucous membrane of the bladder is found thickened in these cases. The fæces, which are very seldom incorporated with the fibrin, are often very healthy in appearance, clearly showing a natural action of the glandular system. Although it is said by most authors that this disease is by no means fatal, yet I think I have seen it degenerate into atrophy of the intestines.

Causes.—In every case that I have

witnessed, I have invariably found the disease produced by the exhibition of mercury conjoined with the too frequent use of aperient medicine; mercury disorganises the blood by separating the fibrinous particles (M. Bauer observes that fibrine exists in the form of very minute white globules in the blood in a state of health: see Philosophical Transactions, 1820, p. 1.) Although mercury does remove depositions of coagulable lymph or fibrin, I am fully confident it also causes a tendency to deposition of lymph. Suppose there be venous congestion of an organ during the action of mercury, so as to interfere with the normal law of the capillaries, what will be the result? an interstitial deposition. I have not presupposed such a statement, the facts have been presented to me in the usual mode of investigation, and the more I observe of the complaint, the more I am convinced of the above truth. Such patients always experience an acceleration of symptoms from the use of mercury, particularly calomel even in small doses. The disease is also found in patients who are very readily salivated, so that it is just right to admit there may be a peculiarity of constitution when mercury puts on so untoward a form. I feel, in making the above observations, that I may subject myself to some controversy; but let me entreat any one who may doubt the statement, to investigate the disease for himself, before he comes to any conclusion. It is a fact known to those whose practice has enabled them to examine the blood of patients under a state of ptyalism from the effects of mercury, that the blood of such patients is buffy, or, in other words, the fibrinous particles of the blood are found separated rrom the crassamentum.

Treatment.—It is necessary to pay great attention to the locality in which the patient resides, as the situation ought to be dry, and free from malaria. The clothing must be warm; flannel next the skin, and the feet protected with cork soles in the shoes; and what I very much commend is friction to the body or trunk with oil or lard every night, and tepid ablution with soap and water every morning: the muscular system should be regularly exercised, without fatigue. The diet should be spare and solid, consisting of bread and meat in the form of a thin sandwich, with salt and aromatics. All stimulants are indirectly injurious: if the stomach be not irritable, or rather if there be no redundancy of acidity, milk may be given as a diluent with the greatest advantage. As a general rule, aperients are bad, leaving the patient very prostrate, but when indicated (that is, when large collections of fibrin are lodging in the intestinal canal as a source of pain) a tea-spoonful of castor-oil is the best purgative. Ammonia and soda are needful according to the acidity of the stomach, or rather when the urine contains a larger quantity than natural of the lithate of ammonia. Carbonate of ammonia should also be given as an antiseptic when there is torpor of the sensorium, indicative of a low character of fever. The mineral acids are to be preferred as tonics when required. An enema of warm water, gradually reduced to 50° Fah. is to be used every morning, and, according to the symptoms, narcotics are to be added. Should the effects continue despite of these means, the nitrate of silver ought to be used by way of injection per rectum, one-sixth part of a grain to be administered night and morning. I have never found any benefit from the use of turpentine, copaiba, benzoin, tar-water, or arsenic, nor by any counter-irritant. These cases may be assisted by an occasional hot salt water bath. In conclusion, the treatment should be of a negative character, by which I mean avoiding every thing that may interfere with the natural law of the part affected; or, in other words, let the organism of the intestines effect its own restoration. It is better to keep that principle in view during the treatment; yet, on the other hand, all irritants must be removed, and acute pain must be snbdued. In the early stages of the complaint, when the evacuations are of mucous or mucofibrinous character, the hydriodate of potash, with morphine, may be given with advantage, the former in ten-grain doses night and morning, with half a grain of the latter at bed-time.

Crayford, Kent, Dec. 2, 1843.

CASE OF EXCISION OF THE UTERUS BY THE ABDOMINAL SECTION.

To the Editor of the Medical Gazette.

Sir,

May I beg the favour of your inserting in an early number of your valuable publication the following case of excision of the uterus by the abdominal section. Though the case terminated fatally, I do not shrink from publishing it, because I believe that in no other way than by a true statement of unsuccessful, as well as successful cases, can we ever hope to establish, on a proper basis, any principles either in medicine or surgery.—I am, sir,

Your obedient servant,

A. M. Heath,

Lecturer on Midwifery in the Manchester School of Medicine and Surgery, and one of the Honorary Surgeons to the Union Hospital.

Manchester, Nov. 28th, 1843.

Jane Burns, æt. 46, unmarried, has never been pregnant, was admitted into the Manchester Union Hospital, under the care of Dr. Hardy, and was transferred to me by the consultation held on the 6th inst. The patient, low in stature, with a tendency to *en bon point*, with blanched cheeks and anæmiated lips, states that, during the last four years, she has suffered from excessive discharges of blood per vaginam, recurring at periods varying from three to four weeks, and continuing for the space of nine or ten days.

About twelve months ago her attention was first drawn to a fulness at the lower part of the abdomen, which, on more particular examination, she discovered to be caused by a tumor about the size of a large orange, and occupying the left hypochondriac region. She suffered no pain from the morbid growth; but its rapid increase in size, and excessive discharges of blood, induced her to consult a medical man, who sent her into the hospital, when she was submitted to a consultation of the medical officers.

Viewed exteriorly, the abdomen resembled that of a woman advanced seven months in pregnancy, the tumor being situated in the median line, and extending from the pelvis to a little above the umbilicus. It appeared firm to the touch, and admitted of free motion in every direction.

The sensations communicated to the finger introduced per vaginam, were those of an unimpregnated uterus; the os tincæ being situated somewhat forward and closed, the fissure being transverse, and the cervix retaining its pyriform shape. When the finger was pressed against the os uteri, and the tumor raised by grasping it through the abdominal parietes, some motion of the uterus was perceived, which led to the supposition of the tumor being attached to that organ.

After repeated examinations, and most careful manipulations, by myself and colleagues, made at different times and in every variety of manner, the conclusion arrived at was the presence of an ovarian tumor; and it was our unanimous opinion that the condition of the patient, and the mobility of the tumor, made it a fair case for extirpation by the abdominal section.

Some preparatory treatment was then decided upon, with a view to the improvement of her general health, as well as to allow her to become accustomed to her change of situation. To improve the alvine secretions, which exhibited a deficiency of bile, occasional doses of blue pill and rhubarb were prescribed. The ioduret of iron was also recommended to be taken three times a day, and a mild nutritious diet was ordered to be supplied.

These objects having been attained, the patient was pronounced to be in a favourable state to undergo the operation, which was arranged to take place on Tuesday, November 21st, at 11 o'clock, A.M.

On this day the temperature of the operating theatre was gradually raised to 70° Fahrenheit. The physicians of the hospital, Drs. Chaytor, Black, and Hardy, having arrived, together with several other professional friends, and my surgical colleagues, Messrs. Ransome and Goodlad, being ready to lend me their efficient aid, the subject of the operation was placed upon the table, when an incision was made from a little below the ensiform cartilage to within an inch and a half of the symphysis pubis, in the median line, but deviating a little to the left opposite the umbilicus, cutting through the skin, adipose tissue, and superficial fascia, thus exposing the fascia trans-

versalis. A momentary pause was then made, to allow the small divided vessels to retract, and a ligature was passed round a small branch of the internal epigastric artery. A portion of the fascia transversalis, seized by the forceps, was then divided to admit the director, upon which the opening was enlarged sufficiently to receive my finger, which guided the bistoury in making the incision to the same extent as the external wound, the peritoneum being opened at the same time and in a similar manner.

The tumor now came into view, and was recognized as the uterus distended by solid matter; and this was rendered more certain by the introduction of a trocar. The size and solidity, with the rapid growth of the tumor, and the probable effects which would be produced by the next periodical discharge of blood, determined me at once to effect its removal *en masse*. Having passed my hand over the fundus of the uterus, and behind it, I raised it from the abdominal cavity, when it was sustained by Mr. Goodlad, while two double ligatures were passed, by means of a sharp-pointed aneurism needle, through the cervix uteri, immediately below the circumference of the tumor. Each ligature was then firmly tied, so as to include one-half of the neck of the womb and broad ligaments. The parts were then excised and removed. No bleeding ensued from the cut surface; indeed, throughout the operation, not more than three ounces of blood were lost; and after the first division of the skin, few complaints of suffering were made by the patient herself.

The intestines, which had escaped, were replaced *in situ*, and the abdominal parietes brought together by the interrupted suture at seven points. The edges of the wound were kept in apposition by applying narrow strips of adhesive plaster. To effect this object with more certainty, a large compress of lint was placed on each side over the recti muscles, and then secured by a broad flannel binder, which was tied firmly round the abdomen. The patient was now carefully removed to a bed which had been prepared for her in the operating theatre. Vomiting came on, and a draught containing morphiæ acetatis, gr. ss., which had been given to her, was instantly rejected. She, however, complained of severe pain about the umbilicus, for which a couple of pills, containing pulv. opii. gr. ij., ammon. carbon. gr. v., were swallowed and retained. The disposition to vomit continued; and after the lapse of half an hour some fluid was ejected, but the pills were not discoverable in it. At this period the pulse was 120, soft and fluctuating.

At 4 o'clock P.M. I met Mr. Ransome in consultation. The pain being very severe throughout the whole of the abdomen, and fearing again to excite the stomach, we determined on the exhibition of a starch enema with morphiæ acetatis, grs. ij. dissolved in it.

The countenance speedily assumed a placid appearance, the pain began to diminish, the pulse was 80 and soft. Respiration performed normally, the skin perspiring freely. Temperature of the room 73° Fahrenheit.

7 P.M.—Has had some sleep; is now composed, and states herself to be much easier; pulse has risen to 100, still soft; has passed urine to the amount of ʒvij. without effort and without distress. Temperature of the room reduced to 70° Fahrenheit.

9 P.M.—Enjoyed a sound sleep for an hour and a half; abdomen free from pain; is cheerful, and expresses her gratitude for the trouble taken in her behalf. Pulse as at last report.

11 P.M.—The pulse has risen to 100, remains soft and tolerably firm; complains of the heat of the room, which is to be reduced a few degrees.

Half-past 1 A.M.—A few spoonsful of arrowroot again roused the stomach. Pulv. opii, gr. j. was administered. From this time she began to sink; the pulse became feeble, the extremities chilled, and at a quarter before 5 A.M. she expired without a struggle, having survived the operation seventeen hours.

Sectio cadaveris, performed twenty-nine hours after death.—On removing the flannel roller and plaster, union of the cut surfaces of the abdominal parietes was observed to have taken place to the extent of an inch at the umbilicus, the adhesion being strong enough to retain the edges together after the sutures had been severed.

Towards the lower part of the wound the peritoneum had become adherent, requiring some force to separate it. The intestines, jejunum, ilium, and colon, were much distended with flatus;

spots of increased vascularity presented themselves in many places, though some difficulty was experienced in distinguishing these from patches which had become tinged by contact with coagula, which had stained the mesentery, rendering the whole of a purple colour.

About fourteen ounces of blood were taken from the cavity of the abdomen; on searching whence it had escaped, we found it to have oozed from the cut edges of the uterus, though no disposition to hæmorrhage from this source was evinced on making the section; notwithstanding the ligatures remained tightly constricting, and completely surrounding, the remains of the organ. The intestinal cellular tissue was filled with clots, which clearly proved to my mind that the hæmorrhage had taken place from no large vessel, to which a ligature might have been applied.

The bladder and rectum were both active, not having been disturbed or otherwise injured. The spleen was remarkably soft; so much so, that when placed upon the table it wanted sufficient consistency to maintain its form.

The kidneys were both much softened at the cortical part, of a brown colour, as if drained, or rather freed from blood by washing.

The liver had a peculiar appearance; in colour resembling clay, and, like every other organ examined, displayed the almost anæmiated state of the system. The thoracic viscera were healthy; the heart soft, pale, and flabby.

Description of the tumor.—The excised mass was found to consist of the whole body of the uterus, enveloping a dense adventitious structure. It was of a perfectly smooth, uniform, globular shape, presenting no trace of salient points; weighed six pounds; had a diameter from above to below of seven inches, and a circumference, in the transverse direction, of 20 inches.

The walls of the uterus were increased generally to about three quarters of an inch in thickness, whilst the fibrous structure was as fully developed as during the dilatation of advanced pregnancy.

The tumor took its rise apparently in the muscular structure immediately beneath the mucous membrane, seeing that some few only of the fibres could be traced into it for a short distance; and had proceeded downwards from the fundus, and more especially on the left side, pushing before it the mucous membrane which invested its globular lower extremity with a smooth shining surfaee.

The adventitious structure, during its growth, had been subjected to severe compression; it was firm, hard, exceedingly dense, and had something of crispness on incision.

Its general colour was yellowish-white, without much vascularity, and it was divided into definite irregular lobules by bluish semi-transparent lines, not unlike the bands which traverse true scirrhous formations. The structure was too compact to permit any view, with the unassisted eye, of any cystiform character; and so far as the tumor had been divided, there was no tendency to softening in any part.

It was found that about two inches of the uterus had been left by the incision, and every trace of the diseased structure removed. The os was of the natural virgin size and form, neither patulous, hardened, nor fissured; and its lips were uniformly smooth, rounded, and plump.

The cervix was not shortened, for the condition which had left the os unaltered in form would not have admitted the cervix to be much spread out.

A few remarks may not be out of place on the error in diagnosis, and the expediency of the subsequent removal of the tumor.

As to the first point, it had suggested itself to many of those who had examined the case as well as myself, that there was something of anomaly in the bloody discharge, and the central situation and firm character of the tumor, and that it was just possible the uterus itself might be the enlarged organ. But the discharges, although large in quantity, were always periodical, and such as not unfrequently occur, therefore, at the season of catamenial decline, altogether independently of any structural lesion of the womb. Again, the os and cervix, on repeated nice examinations, gave evidence of no deviation whatever from the normal condition, a circumstance of rare occurrence with the kind of tumor which was subsequently found to exist.

The tumor was so uniformly smooth and rounded that the suspicion of a large hard fibrous growth of the uterus could hardly be entertained, seeing tha

such swellings are almost invariably very irregular and nodulated in form. The uterus was examined stethoscopically, but neither by that, nor any other means, could any suspicion be had of pregnancy; and the diagnosis of ovarian disease was confirmed by the manifest enlargement which seemed to be taking place in the swelling during the few weeks which preceded the operation. On the other hand, a firm, dense, unfluctuating mass, and a more or less central position, are well known by those who have examined many of such cases, not to be incompatible with enlarged ovary.

After the true source of the swelling had become evident (a trocar having been previously thrust in by which the character of the tumor was ascertained) the question arose, whether, since a large part of the danger had been already incurred in the abdominal section, exposure, and manipulation of the bowels, &c. the greatest probability of ultimate good was not in favour of the extirpation of a growth which was rapidly sapping the constitutional powers by hæmorrhage. Instances were on record where such a step had been taken from intention; many cases had occurred of successful division of the uterus through the vagina, and as far as the peritoneum and ligature of the pedicle were concerned, there appeared to be no great increase of risk in the excision of the uterus over that of the ovary.

The diseased growth was evidently a specimen of what has been called the fibrous, and by Dr. Ashwell the hard, tumor of the uterus, who has given a clear account of its structure in the 6th No. of Guy's Hospital Reports; and although not high in the scale of malignancy, it partook to some extent of the character of such transformations. The earlier bleedings in such cases ooze from the mucous membrane which invests the free portion of the tumor, whilst the subsequent hæmorrhage will flow in increased quantity from the softening and disintegration which never fail to attend the onward progress of such growths if life be sufficiently prolonged for their development.

A FEW OBSERVATIONS

CONCERNING THE

ILL EFFECTS ARISING FROM THE CIRCULATION OF CERTAIN PARTICLES IN THE BLOOD,

Being the abstract of a Paper read before the London Hospital Medical Society,

By G. Betts, Esq.

(For the Medical Gazette.)

After briefly enumerating the several opinions relative to the formation of consecutive abscess, cancer, &c., the author proceeded to make a further inquiry into the subject, by considering it under the three following heads:—

1st. What effects follow the introduction of foreign particles into the circulation?

2d. Are such effects, when we observe them in disease, at all to be associated with a like cause?

3d. How do such effects manifest themselves?

In connection with the first inquiry, it is necessary to premise that there are three principal series of capillaries in the higher animal economy, each being the termination of a distinct set of vessels. Thus there is a *systemic series*, in which the arteries terminate; a *pulmonic series*, in which, through the heart, the systemic veins terminate; and an *hepatic series*, in which the portal or abdominal visceral veins terminate: and upon the introduction of foreign particles into any vessel of the body, we get its effects manifested in that particular system in which the vessel terminates. The experiments which have led to this conclusion were here detailed, and were principally made by injecting mercury into different parts of the circulation; but the author had performed a corresponding series, using pus instead of mercury, and he still found that it produced a certain amount of inflammation and abscess in the tissues and organs supplied by the capillaries in which the vessel terminated. Thus pus thrown into the mesenteric veins produced abscess of the liver; when injected into the crural or other systemic vein, it occasioned abscess of the lungs; when the amount of pus thrown in was considerable, it produced almost instant death, by blocking up the capillaries, and so stopping the circulation in the lungs; when introduced

into the arterial system, it caused abscess in the tissues supplied by those vessels: and the author had hoped to have completed some parallel experiments by the introduction of the cancer cell into the circulation; but still these are sufficient to show that the pus globule, among other particles, is arrested at the capillaries, and gives rise there to abscess, &c.

2d. *Whether such, when we observe them in disease, are at all to be associated with a like cause?* It is pretty well agreed by pathologists that suppurative phlebitis is one of the most frequent causes of disseminated abscesses; but to review the several systems, the investigations of Arnott, Cruveilhier, Dance, and others, have left little doubt but that abscess of the lungs is generally, and perhaps always, associated with the suppurative inflammation of some vein, and of which accidents to bones are the most frequent cause. Hepatic abscess also often occurs after operations implicating the viscera, and Dr. Budd has recently directed attention to its association with dysentery, and its probable origin in the suppuration of one of the small mesenteric veins. Now these, with other premises, warrant the opinion that suppurative phlebitis, or, in other words, the introduction of pus into the circulation, is almost always the precursor of these abscesses.

In reference to the third question, as to *how these effects manifest themselves*, the author had but to direct attention to the relative measurements of the capillary vessels and the pus globule or cancer cell, in order to show that the latter were much too large to pass the capillaries; and if it stopped there, what effects would result? Why, experiment told us that they acted as other irritants, producing inflammation and abscess; and that their own capability of multiplying (like that of other cells), particularly in reference to pus, was sufficient to account for the rapid accumulation of the matter, without at all supposing that the whole of it was brought there and deposited ready formed. There is also great reason for believing that other morbid effects, as tubercles, &c. result from the circulation of their particular cell globules, which, moreover, may manifest a disposition to become better and more fully developed in certain tissues.

LIGATURE OF THE SPERMATIC ARTERY

FIRST SUGGESTED BY HARVEY.

To the Editor of the Medical Gazette.

Sir,

In my work on the Diseases of the Testis, &c., lately published, I have unintentionally committed an act of injustice to the merits of a distinguished individual, by an oversight, for which I am anxious to take an early opportunity of making amends. The omission alluded to was detected by Mr. Soden, of Bath, and kindly pointed out to me in the following letter, for which, as well as for the flattering expressions contained in it, I beg to tender him my sincere thanks.

"Sir, — Although I have not the honour of being personally known to you, I am induced to address you in consequence of the pleasure I have derived from the perusal of your valuable work on Diseases of the Testis. Few professional works, indeed, have afforded me so much gratification as this production of your pen. Its historical department is extremely interesting, and evinces such a liberal desire on your part to do justice to the merits of all your predecessors, that I trust you will excuse the liberty I take in referring you to an authority that appears to have escaped your vigilant and comprehensive research. You give the credit of originality to Maunoir for the application of a ligature round the spermatic artery, as a substitute for extirpation of the testicle. You are perhaps right in considering this operation as of little practical value; but if you had been acquainted with the following passage in Harvey's work on Generation, I am sure you would have paid a tribute to the claims of our immortal countryman, the discoverer of the circulation, who not only suggested the plan of tying the spermatic artery in certain cases of enlarged testis, but actually and successfully carried it into effect.

"*Extract from Harvey on Generation. English edition. London*, 1653.

" 'Having had an eye upon this emploiment of the arteries, or circulation of the blood, I have sometimes perfectly cured exceeding great herniæ carnosæ,

beyond all expectation; providing only that the little artery being tyed or cut off, no nutriment or spirit might have accession to the part affected; by which it fell out, that the fatal tumor was afterwards easily extirpated either by incision or adustion. A certain man, besides other infirmities (and of this story I can produce many testimonies), had a sarcosis or fleshy tumor in his scrotum or cod, bigger than a man's head, hanging down to his knees; and from it another hernia carnosa, as thick as one's wrist (or a cable), passed into his abdomen, so that the disease growing to so great a height, no man would undertake the cure by incision, or otherwise. Yet I perfectly cured this so vast excrescence, which so much distended the scrotum and encompassed the testicle, by the means aforesaid; and yet left the leading and preparing vessel to the use of the testicle, without any prejudice or touch upon the other vessels descending into the scrotum by the tunica vaginalis, or coat of the testicles so called. But these and other cures accomplished clean beside the common opinion, I shall, in my Physical Observations (if God grant me life), discover at large.' (p. 113-114.)

"It may not be quite clear what was the precise nature of the disease which Harvey treated in the foregoing case; but I think he intended to tie the spermatic artery, leaving the vas deferens entire, in the expectation that the morbid part would be absorbed without destroying the function of the testicle. The case is curious; and it appears to me surprising that it should have escaped the observation of the numerous and distinguished authors who have written on the physiology and pathology of arteries since the commencement of the present century, but I am not aware that it has been noticed by any of them. The proposal to tie the thyroid artery in bronchocele, and to promote the absorption and arrest the growth of large tumors by putting a ligature round the vessels that nourish them, has been generally regarded, I believe, as a modern suggestion; but it is evident that Harvey was acquainted with the principle on which such treatment has been recommended. Harvey's Physical Observations were never published; and it is to be feared they were lost, with his other papers, during the troubles in the time of Charles I. The work on Generation was edited by Sir George Ent, who, in the preface, gives an interesting account of an interview with the author, during which Harvey pathetically lamented the disastrous state of public affairs, and at page 418 he feelingly alludes to the loss of his manuscripts. I will not, however, detain you longer, but beg you will forgive this intrusion on your time; and believe me, dear sir,

"Very truly yours,
"John S. Soden.

"Bath, Nov. 18, 1843.

"*To T. B. Curling, Esq.*"

That the application of a ligature to the main artery supplying a particular part, morbidly enlarged, should cause that part to waste, if such a notion had never been entertained before, would not, in the present advanced state of physiological knowledge, be regarded as anything extraordinary; but when we consider the ignorance on these subjects which prevailed at the time this idea entered the mind of Harvey—that at that period the circulation and the distinct offices of the arteries and veins had only just been discovered—the suggestion must be viewed as indicative of a mind of no ordinary sagacity, and as showing how ready this great man was to make a practical application of the results of his grand discovery; and although this plan is not likely to be applied with benefit to any of the diseases of the testis, the principle upon which the treatment was founded is a valuable one, and has, in other cases, as for instance in bronchocele, been successfully acted upon.

I shall be obliged, sir, by your giving insertion to this communication, which may prove interesting to many of your readers. It will tend to shew that the writings of some of our great predecessors, now neglected, may be studied with advantage; and it may prevent others from falling into the error that I have committed, of describing as a novelty in the 19th century, that which was suggested and practised in the 17th.

I am, sir,
Your obedient servant,
T. B. Curling.

37, New Broad Street,
Dec. 2d, 1843.

MEDICAL GAZETTE.

Friday, December 8, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

THE INFANT MARTYRS.

A PHILANTHROPIC physician in the west of England has given this quaint title to his reports on the burning of children, communicated to the Royal Institution of Cornwall.

On examining the mortality of various parts of England in 1838, it appears that in certain portions containing a population of nearly three millions, the deaths by burning were 723, or 1 in 4085. If this were the average of all England, the deaths from this frightful cause would be about 3,500 annually. Happily, however, this is not the case. In Norfolk and Suffolk the deaths by burning are 1 in 6000 of the population; and in the metropolis only 1 in 7000. On the other hand, in the mining districts of Stafford and Shropshire, the deaths from this cause were about 1 in 2000 of the population!

Yet, although the returns show clearly that mining operations increase this species of mortality, they show with equal clearness that the majority of those who die by burning, perish, not by the explosion of mines, nor by the conflagration of houses, but simply by their clothes catching fire. In some cases this may be inferred by reasoning, Thus, among the 723 deaths by burning above mentioned, 541 occurred under ten years of age. But, in some of the more accurate returns, the thing is expressly stated. Thus, of 94 who perished by burning in South Staffordshire, 81 were destroyed by their clothes catching fire; and of these 61 were under ten years of age.

Under the age of one year, the number of deaths from burning is very small, as the mere infant can rarely get to the fire. Up to the age of five, the danger from this source increases every year; for vivacity, curiosity, and activity, are daily augmented, while the lessons of caution and obedience have scarcely been learned. After this period, there is a gradual decrease, till old age brings back the weakness and the dangers of childhood.

Age has so great an influence in this species of casualty, that out of 58 deaths from this cause in six Cornish Unions, 48 occurred between the ages of 2 and 8.

In the London Bills of Mortality, it appears that the proportion of deaths by burning has increased portentously since 1800, "advancing," says Dr. Barham, "*pari passu* with the use of cotton goods."

This must, no doubt, have had a considerable share in the change; but it is difficult to attribute the whole to this cause, especially when we find that even in the last century the proportion was more than twice as great in the latter as in the earlier half; while we can hardly think that the use of cotton was very common among the lower ranks before 1800. A change of social relations may have contributed to the increase, for the greater bustle and competition of modern life have probably compelled more mothers to leave their children unwatched and unguarded.

The deaths from burning are, of course, most frequent in cold weather, being inversely as the deaths from drowning. There is a great resemblance in the history of many cases of burning, and the following is a sample of a large class.

"A little girl, four years of age, had been drinking tea at a neighbour's; and having dropt some on her pinafore, was holding it to the fire to dry, when it became ignited. Another girl, about three years old, was the only person in the room at the time, but the screams brought two young women down stairs

almost immediately, and they tried to extinguish the flames, but from ignorance of the course proper to be pursued, quite ineffectually. The child died in a few hours."

Murder by burning is very rare. A case, however, occurred at Truro, some years ago, where it was suspected. A dissolute woman had locked up her child in her room, alone, where it was found, burned to death, some hours afterwards. "On accurate examination by Dr. Barham, in conjunction with Messrs. Bullmore and Spry, some portions of the tinder were discovered in the lower part of the windpipe. These must have been drawn in with the breath during the last moments of the child, whose mouth and face had evidently been enveloped in his burning clothes." Dr. Barham adds, "this was the principal circumstance which prevented the committal of the mother for murder."

We can readily believe that the woman was innocent, but, as a mere matter of speculation, could not a murderer also have wrapped the child's face in its clothes?

As to the means of preventing these fearful catastrophes, they are obvious enough; the history of the case of the little girl, which we gave above, will supply hints for the most effectual remedies. In the first place, children of a tender age should not be left alone in a room with a fire. If the feverish hurry of modern existence renders the observance of this rule impossible, the next best thing is a fire-guard, or a high fender fastened to the sides of the hearth. Dr. Barham thinks that the Society for Promoting Christian Knowledge and the Polytechnic, might unite in providing succinct instructions for extinguishing clothes on fire, and also in furnishing specimens of cheap fire-guards and fenders. The sufferer, instead of being allowed to run about the room, should, of course, be instantly thrown on the floor, and wrapped up in a rug or blanket. It is also advisable to throw cold water upon him, or to apply a wet towel firmly to the burning clothes.

If a proper guard cannot be obtained for the fire-place, Dr. Barham proposes some sort of imprisonment for young children as an indispensable substitute. This is a painful recommendation, and many would think the remedy worse than the disease, or, at least, than the *chance* of the disease. We should not like to see restraint chairs in every cottage.

Dr. Barham would also wish cotton goods to be renounced, and the ancient woollen garments to be again worn; but he acknowledges that this is a wish of difficult accomplishment. Society has advanced from woollen to cotton, and does not willingly go back:

——— revocare gradus ———
Hic labor, hoc opus est!

But it has been proposed that linen and calico should be made less combustible by being dipped in a chemical solution; and we agree with Dr. Barham that this proposal is worthy of consideration.

Lastly, if the pinafore, instead of "floating wild as mountain breezes," is fastened down so as to keep the dress in contact with the body, without impeding motion, the risk is considerably lessened.

Mr. Edward Osler, who has written some observations as an *envoy* to Dr. Barham's little pamphlet, insists with vigorous earnestness on the vast number of children annually sacrificed by fire, and the equal multitude, who, though not burned to death, might envy the victims who perish. He describes the progress of a severe burn, its slow cure, its hideous cicatrix, and the contraction of the injured limb requiring the knife of the surgeon to restore freedom of motion.

"Such are the evils we are called upon to deplore and prevent—thousands of

children destroyed by a frightful and torturing death; thousands more escaping with life, but under circumstances which make life hardly a blessing; tortured, disfigured, and crippled."

He, too, urges the use of stuff pinafores which the decent poor would provide for themselves, and which might be given to the necessitous. The clergy, too, and other philanthropists, might give a word of advice, of caution, or even of reproof, when a child is seen wearing dangerously inflammable clothes.

Mr. Osler wishes, moreover, to see a tract on the subject issued by the Christian Knowledge Society, and to have a page devoted to it in the popular school-books which are sold by myriads.

As an application to burns he recommends oil of turpentine. On this point, as our readers know,

Chirurgi certant, et adhuc sub judice lis est.

We should be more inclined to recommend the laity to use scraped potato, or flour.

This pamphlet will not be without advantage to the community.

What Pope says of vice, or moral evil, that to be hated it needs but to be seen, may be applied with equal truth to physical evil. Give a faithful portrait of its lineaments, and mankind will unite to repel its aggression. Dr. Barham and Mr. Osler have, therefore, done some service to the state.

INCREASE OF DISEASE AMONG THE POOR.

The District Surgeons have appended to their Annual Medical Report to the Directors of the Town's Hospital the following note:—

"From the above Report, it is evident that disease generally has been fearfully on the increase for the last twelve months. In 1841-2, 5,296 cases received medical relief; this year, 19,085 cases; increase this year, 13,789 cases. Of this year's report 12,967 were cases of a peculiarly distressing epidemic fever, and 736 cases of typhus fever. Of the former 12,967 cases, 12,397 were treated at their own homes, and 570 sent to the Royal Infirmary. Of those treated at home 304 died, being in the ratio of 2·363 per 100 cases.

"The number of typhus cases this year exceeds those of last year by only 5 cases, the number for 1841-2 being 731; for 1842-3 being 736. The mortality, however, of the latter exceeds the former—the numbers being, 19 for 1841-2; and 34 for 1842-3.

"From Nov. 1838, till Nov. 1842, there were (according to the medical records of the hospital) 18,927 cases that received medical relief. This year, however, exceeds that number by 158 cases, and allowing a medium of six vislts to each case (which is much under the truth), it gives the gross amount of 114,510 visits given by the district surgeons to the city poor during the last twelve months."

Independent of the alarming fever now prevalent, there has been a great increase of disease generally for the last twelve months. Thus in 1841-2, exclusive of fever cases, there were treated at home for other diseases 4,565 cases; while in 1842-3, there were 5,382—being an increase of the enormous number of 817 cases.

Frightful as this picture is, still it is gratifying to find that something has been done, and is still doing, in order to check the ravages of disease, and alleviate the sufferings and privations of our pauper population. About three months ago the district surgeons recommended to the Directors of the Town's Hospital the propriety of affording to the most necessitous of their pauper patients immediate assistance in the shape of wholesome food, in addition to the ordinary means of relief, to which proposition the Directors at once kindly assented, and placed at their disposal a supply of penny tickets for distribution,—the Directors justly considering that their medical officers were the best qualified, from their personal knowledge of the circumstances of the poor, to discharge this duty in a discriminating and efficient manner.

This promiscuous charity on the part of the surgeons has amounted weekly to upwards of £20, and has been the means of imparting relief to thousands of our fellow-creatures whom want and disease had reduced to the extreme of wretchedness.

As a matter of economy, the advantage of this plan will be apparent from the fact, that if the Directors of the Town's Hospital had not acted in the liberal manner they did, it is believed that at least a third of the 12,397 cases of fever—viz. 4,099 cases—must have been sent to a fever hospital by the District Surgeons to keep them from starvation; which, at 15s. per case (the sum charged for fever cases by the Royal Infirmary), would

have amounted to £3,074. 5s. instead of £283. 15s. 8d. being the sum actually distributed by the medical officers for the last three months.

The public cannot fail to perceive the immense amount of labour performed this year by the 17 District Surgeons—a duty, the onerous, disagreeable, and dangerous character of which can only be fully estimated by a personal inspection of those wretched hovels of disease and penury which but too plentifully abound in this city. In these dens (for they deserve no higher appellation), many of which do not exceed from 6 to 9 feet square, whole families were found by the surgeons (all affected with fever), consisting sometimes of 9 individuals, stretched upon the floor, without either bed, bedding, fire, or even a morsel of food but that which was daily distributed to them by the Visiting Surgeon. In consequence of the above arrangements on the part of the Directors of the Town's Hospital, however, the state of the diseased poor has been vastly ameliorated.

Glasgow, Nov. 27, 1843.

CONSUMPTION CURED BY NAPHTHA.

To the Editor of the Medical Gazette.

SIR,

I SHALL feel obliged by your correcting a mistake which appeared in the short account I sent your journal, of a case of consumption cured by naphtha. In the published account it is made to appear that the patient applied for admission to the Colchester Hospital, and was refused in consequence of his labouring under phthisis in the last stage. This mistake arose from my having mislaid a note I received from Dr. Baker on the case, which I have since found, and which is as follows:—

"I considered Perry to be labouring under confirmed consumption, and intimated as much to the Rev. Mr. Leigh (the clergyman of the parish), as a reason for not sending him to the Colchester Hospital. If cases like this can be cured by the use of naphtha, it will be a new era in medicine."

This explains fully the misapprehension on my part, which appeared in the first statement. I wish further to add, that I saw Perry a short time since, when he told me he continued quite well.—I remain, sir,

Your obedient servant,

A. G. PROCTOR.

Dec. 5, 1843.

SUPPRESSION OF HÆMORRHAGE.

To the Editor of the Medical Gazette.

SIR,

THE hint of "A Student" in reference to the suppression of hæmorrhage, contained in your journal of the 27th September, has induced me to send you the following remarks.

I was called, some time ago, to see a stout middle-aged man, who was bleeding profusely from the nose, and who had had several similar attacks during the two preceding days. He was in bed; but I desired him to sit up, and, as lately recommended, to raise the arm of the affected side above his head: he had only done so for a few seconds when the hæmorrhage stopped, and he fainted.

Here the flow of blood to the head was so far diminished by the erect posture and the elevation of the arm, as not only to arrest the bleeding, but, at the same time, to induce syncope. Might not the practice, then, be extended from cases of epistaxis to cases in which we are desirous of producing fainting, and that with as little loss of the vital fluid as possible? In acute inflammations, in strangulated hernia, and previous to the reduction of dislocations, the patient is bled in the erect position to faintness; and may not the elevation of the arm, after the commencement of the bleeding, be instrumental in producing the desired effect?

As the suggestion is simple, it is hoped that some of your readers may be induced to make trial of it, and communicate to you the results of their experiments.

I am, sir,

Your obedient servant,

JUVENIS.

Nov. 14, 1843.

QUARTERLY REPORT OF THE OBSTETRIC DEPARTMENT OF THE PHILADELPHIA DISPENSARY,

For First, Second, and Third Months, 1843.

BY JOSEPH WARRINGTON,
Obstetric Physician.

FORTY-FOUR women have been delivered, all at or near the full term of utero-gestation, except one, in which the ovum, having been developed to the sixth month, was expelled at the termination of the seventh.

The average duration of labour, in thirty-nine cases, was fifteen hours, twenty-six minutes; the extremes being one and a half, and sixty-four hours.

The average amount of time required for the spontaneous delivery of the placenta, in

thirty-seven cases, was ten minutes; the extremes being five, and sixty minutes.

Manual assistance was afforded for the delivery of this mass in three instances, in which the disk presented so large a surface to the orifice of the uterus, that it could not pass through it until one edge was drawn down by the finger after the patient had made ineffectual efforts for extending it, in one instance fifteen minutes, another at twenty-five, and the third at forty-five minutes subsequent to the expulsion of the fœtus.

Forty-five children have been delivered, one woman having twins.

Twenty-nine of these children were males, and sixteen were females.

The vertex of the cephalic extremity of the fœtal ellipse presented in thirty-two instances; of these, nineteen were in the first position, and seven in the second.

One child, developed to the sixth month, but born at the end of the seventh, presented the breech in the fifth position.

One of the doublets presented the dorsum; it was converted by the use of a hand into the second position of the breech.

The umbilical cord was noted in one case to be about one-half the usual length, measuring ten inches.

One child had a slight deformity of the pedal articulation, for the correction of which appropriate dressings have been applied.

One child also had exomphalos, which is improving rapidly under a compress and roller.

The os uteri in one case, during the first stage of labour, continued so rigid as to render free bleeding necessary to promote relaxation.

There were two instances of irregular contractions of the uterus for about two weeks before the termination of labour; in one of these the os uteri was observed to be partially dilated about eight days previous to delivery.

In the second stage of the labour, the entire duration of which has been noted to be sixty-four hours, forty grains of ergot were administered, without, however, any marked effect in increasing the expulsive action of the uterus.

The forceps was used in one case to deliver from the superior strait of the pelvis a child, the occipito-mental diameter of which measured seven, the occipito-frontal six, the biparietal three and a half, and occipito-bregmatic three and a half inches.

This instrument was used also in a primiparous female, for the delivery of a child, the head of which had become arrested at the inferior strait. The child weighed ten and a half pounds.

There were three instances of hæmorrhage after delivery. Free fiction, regular compression, and the ergot, in tincture or substance, were resorted to. The flow became speedily arrested in two cases; in the third, however, the atony of the uterus was so great, that its contractions could not be reproduced until the hand had been introduced to stimulate its internal surface. Recovery was rapid in the two first instances; but in the third the patient suffered much from the usual consequences of excessive loss of blood for several days.

There were five cases of attacks of inflammation of the peritoneum, uterus, or its appendages, after delivery. In three of them the disease was quickly arrested by prompt and free venesection, cathartics, and anodyne diaphoretics. One continued through a number of days, though actively depleted, both generally and locally, and one resisted the action of all treatment.

The patient was badly accommodated in one of the densely inhabited houses on the bank side of Front Street, and had suffered much from moral and physical causes, both before and subsequent to her parturition. She died on the sixth day after delivery. All the other women recovered.—*Philadelphia Medical Examiner.*

REMARKABLE CASE OF CALCULUS.

M. Segalas lately communicated a case to the Academy of Medicine, which tends to show that at present the difficulties of lithotrity are not so much mechanical ones, as difficulties resulting from the complications of the calculous disease.

The head of a respectable family came to Paris, four years ago, to seek advice for a hematuria and some other affections of the urinary passages.

M. Récamier, who was first consulted, sounded, to see if there was a stone in the bladder; but instead of a stone he found a fungus. A few days afterwards M. Ségalas made the same examination with the same result. In consequence of this, medical means alone were employed, and the patient went home, and continued to live there, with nearly the same symptoms. After some time, however, the hematuria, which had hitherto appeared as much when the patient was at rest as under other circumstances, began to come on more especially after exercise, just as if some foreign body had been added to the fungus. The calls to make water became more and more frequent, the pain more and more acute, so that the patient resolved to return to Paris to seek for surgical aid.

M. Ségalas ascertained, by sounding, the presence of a stone in the bladder, and after some days' preparation, considering the good constitution of the patient, and his extreme

repugnance to lithotomy, he performed a first *séance* of lithotrity, in the presence of M. Gouraud, the physician who usually attended him. It was very easy, very short, and but little painful. For some time, matters went on perfectly well; but on the sixth day, when straining at stool, the patient was attacked with apoplectic symptoms. These were at first encountered with some appearance of success by MM. Récamier and Gouraud, but they afterwards grew worse, and death took place a week after the attack.

Post-mortem appearances.—The bladder, which was hypertrophied, contained a fungus as large as a walnut, and a heart-shaped stone nearly as big as a hen's egg. This calculus was divided into two large pieces and several small ones. The kidneys were inflamed, particularly the left one, and there was granulated pus upon their surface. There was an extravasation of blood in the right hemisphere of the brain, at the union of the posterior third with the two anterior thirds, besides an hydatic cyst in the corresponding ventricle.

Thus it was possible to begin the operation of lithotrity without difficulty, in spite of the size of the stone, in spite of the presence of a fungus; but even putting aside the apoplexy which carried off the patient, the complications of the calculous disease were of themselves beyond the reach of art.—*Gazette Médicale.*

BOOKS RECEIVED FOR REVIEW.

Elements of Anatomy. By Jones Quain, M.D. 5th Edition, edited by Richard Quain and William Sharpey, M.D. Part I.

The Handbook of Hydropathy, for Professional and Domestic Use. By Dr. J. Weiss.

Gonorrhœa, and its Consequences; with a short Historical Sketch of the Venereal Disease. By J. B. Childs, M.R.C.S.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, December 1, 1843.

J. Clark.—G. Orchard.—C. Sutcliffe.—J. Murphy.—C. Watkins.—A. A. Davenport.—W. Hanrahan.—K. Burton.—A. Parr.—C. Brunt.—W. Spackman.—A. N. Jones.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, November 30, 1843.

J. Baber, London.—E. W. Woodcock, Caythorpe.—W. T. Edwards, Caerphilly.—J. C. Harper.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, November 25, 1843.

Small Pox	11
Measles	41
Scarlatina	61
Hooping Cough	45
Croup	7
Thrush	5
Diarrhœa	13
Dysentery	2
Cholera	1
Influenza	8
Ague	0
Remittent Fever	3
Typhus	40
Erysipelas	4
Syphilis	0
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	179
Diseases of the Lungs and other Organs of Respiration	418
Diseases of the Heart and Blood-vessels	35
Diseases of the Stomach, Liver, and other Organs of Digestion	69
Diseases of the Kidneys, &c.	12
Childbed	4
Paramenia	0
Ovarian Dropsy	1
Disease of Uterus, &c.	3
Arthritis	0
Rheumatism	6
Diseases of Joints, &c.	3
Carbuncle	0
Phlegmon	0
Ulcer	1
Fistula	0
Diseases of Skin, &c.	1
Dropsy, Cancer, and other Diseases of Uncertain Seat	113
Old Age or Natural Decay	81
Deaths by Violence, Privation, or Intemperance	20
Causes not specified	1
Deaths from all Causes	1188

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ *W. of Greenwich.*

November.	THERMOMETER.	BAROMETER.
Wednesday 22	from 53 to 45	29·23 to 29·40
Thursday . 23	40 54	29·09 29·26
Friday . . . 24	29 41	29·32 29·34
Saturday . 25	29 45	29·42 29·34
Sunday . . 26	47 55	29·40 29.42
Monday . . 27	56 50	29·41 29·45
Tuesday . 28	47 54	29·74 29·84
Wednesday 29	from 41 to 50	29·94 to 30·00
Thursday . 30	30 48	30·02 29·77
December.		
Friday . . . 1	47 41	29·67 29·75
Saturday . 2	33 44	29.84 29·86
Sunday . . 3	35 49	39·00 30·03
Monday . 4	46 51	39·00 29·96
Tuesday . . 5	46 52	29·84 29.76

Wind variable, S.W. prevailing.

Except the 28th and 29th ult. generally cloudy, with frequent rain.

Rain fallen, ·99 of an inch.

CHARLES HENRRY ADAMS.

WILSON & OGILVY, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, DECEMBER 15, 1843.

CLINICAL OBSERVATIONS ON THE CONSEQUENCES OF STRICTURE OF THE URETHRA.

By B. Phillips, F. R. S.

Among the more serious and frequent of the affections to which stricture of the urethra may give rise, are an altered condition of the mucous membrane of the urethra behind the contraction, disease of the prostate, of the testicle, of the bladder, of the kidney, and of the rectum.

Even if we had no opportunities of ascertaining, after death, the state of the urethra between the stricture and the neck of the bladder, we might naturally expect that it must suffer from the frequent and urgent efforts to force the urine through the contracted part, and the irritation kept up by the constant presence of a certain portion of the fluid which is commonly retained there when the effort has ceased. However, the opportunities of making such observations after the death of the patient are, unfortunately, by no means uncommon.

It is only a few days ago that you had an opportunity of witnessing the state of that portion of the urethra, in a man who, during treatment for stricture, was attacked with pneumonia, from which he died. In the urethra two strictures were found; one about two inches from the orifice, which had been passed, one near the bulb, which had not been passed, and which was very close. The portion of urethra behind the latter stricture was thickened and rough, almost fungous; the prostate was enlarged, its ducts very open, and when pressure was made upon that gland a turbid fluid escaped in considerable quantity. Pressure on the vesiculæ seminales caused the escape of a muco-purulent fluid, and the vesicles themselves were much thickened. The inflammation had not extended to the testicle; but had he lived longer, this would most likely have happened; for he had complained of uneasiness at the back of the testicle for some days before he died.

In many cases the consequences of this pressure and irritation are very serious: the posterior part of the canal—that behind the stricture—may become dilated even to the size of an intestine; and indeed it has been proposed in such cases, when there is complete retention, and when no instrument can be passed along the urethra into the bladder, to puncture the urethra at this point instead of puncturing the bladder. When the urethra becomes thus dilated (and although frequently described, I do not think it is of common occurrence), the neck of the bladder loses its power, and the urine will then dribble away through the stricture: the mucous membrane suffers; it becomes affected with chronic or subacute inflammation, and may give way so as to allow of the escape of a small quantity of urine into the cellular tissue, in which violent inflammation is quickly set up; but it almost always determines sloughing of the cellular tissue, with which the urine gets in contact, and most serious mischief ensues. If the quantity of urine which escapes be considerable, it may infiltrate a great extent of cellular tissue, even passing to the inguinal and inferior abdominal region. In these cases a knowledge of the anatomy of the aponeurosis or fascia of the perineal region enables you to determine the probable point of the urethra which has given way, and also guides you as to the depth of your incisions to facilitate the discharge of the extravasated fluid; for in all such cases the first point is to get rid of the irritating fluid, and this can only be done by giving it the utmost possible facility for escape. In some cases, where the quantity of urine which has escaped into the cellular tissue is small, the symptoms and

the consequences are much less serious: a few drops only have passed; inflammatory action may be set up around, so as to form a kind of sac, and prevent further infiltration. After a time the patient may direct your attention to a small, pretty well-defined tumor in the perineum; you puncture it, and a little pus mixed with urine escapes. The cavity being lined by a membrane something like that of an ordinary canal, the opening manifests no disposition to close, and a very little urine may pass along it whenever the patient tries to empty the bladder. In many cases it will close when the urethra is restored to its proper size; in others it obstinately remains open. In all such cases there is reason to fear that a certain portion of urine will pass along this fistulous canal at each attempt to make water; and to prevent this either a catheter must be introduced whenever the patient desires to make water, or the instrument must be retained for some time — until, indeed, we have reason to think the accidental canal is closed. In some cases the constant presence of an instrument cannot be borne; and, indeed, it tends to keep up irritation in the fistulous canal: if this be so, it may be that the patient will be less irritated by introducing the instrument whenever he wants to make water. Even when no urine passes along the fistula, it sometimes resists all attempts to induce it to close.

Under such irritation as we have described, the prostate is very apt to suffer. It may be that it proceeds no further than to excite the organ to increased action, a larger quantity of its proper fluid than is natural being secreted and poured into the urethra; and in those cases the ducts are sometimes greatly dilated. It may be that the organ becomes enlarged; and then, by pressing upon neighbouring organs, it may cause much discomfort and distress. It may, by projecting into the rectum, interfere with the passage of fæcal matter; and by pressing upon the neck of the bladder, it may prevent the free passage of urine. The prostate trouble may go farther; the irritation may determine abscess, and the pus may escape by finding its way through the mucous or cutaneous surfaces.

When the prostatic affection does not proceed beyond an increased action of the function of the organ, the patient may complain of a sense of uneasiness or weight in the perineum or in the rectum; but he is oftener disquieted by finding, after the exertion at stool, or in passing the urine, that a certain quantity of viscid transparent fluid passes away also: usually it escapes with the last drops of urine; sometimes with the first. In all cases the patient is tormented with the idea that the fluid is semen.

Usually the medical man has no difficulty in distinguishing between the two. Except the patient be reduced to a state of great exhaustion by disease or by excesses, the seminal fluid is not, like that of the prostate, a perfectly homogeneous and transparent fluid; and usually, by the aid of a microscope, the animalcules, or spermatozoa, may be detected in the fluid which is derived from the testicle. Sometimes, when the prostate has suffered much, the fluid it furnishes will become opaque and less viscid—mucopurulent, in fact; but in that case there will be evidence of prostate disease.

In many cases, then, the discharge which takes place is not spermatic, but prostatic, fluid; but it has exercised an equally depressing effect on the patient's mind. He always believes that the discharge is seminal; and I have always found it very difficult to convince him that it is not so. This discharge happens frequently when the stricture is not very advanced: when the patient goes to stool a certain quantity may pass; so also with the first or the last drops of urine, but unaccompanied with any particular sensation. This fluid is transparent and adhesive, and the quantity passed at a time is rarely great. I have been applied to by patients who had nothing else to complain of; but this was enough to produce profound hypochondriacism. It sometimes induces great debility of the sexual organs; but as I have never known the quantity large, I cannot conceive that the increased action of the prostate can account for it, and therefore I conclude that the debility is mainly dependent on the mental depression.

When the prostate is thus affected, there is only one plan of treatment which I have known to be commonly successful; it is the application of caustic on the prostatic surface of the urethra. How it acts—whether by counter-irritation or otherwise—I am by no means certain; but of the reality of the fact I am quite convinced.

In some cases the irritation determines suppuration of the prostate, when it may be completely broken down and destroyed: the pus may find its way into the bladder or the urethra, or it may make way to the skin.

A man, æt. 62, was under treatment, not long ago, for prostate disease, apparently the result of stricture of the urethru. The account he gave on admission was, at "present no water passed, that for years he had experienced great difficulty in making water, that the water was often thick, that frequently he had severe bearing-down pain in the perineum." On examining the perineum it was evident that the urethra had given way, and that urine was infiltrated. Several incisions were made; a good deal of purulent fluid with the odour of urine escaped;

fomentations were kept to the parts, and in a few hours he began to pass small quantities of urine by the urethra. The shock he had sustained was, however, too great, and he died. Upon examination after death, the urethra was found not to have given way, but all that remained of the prostate was its fibrous covering; the whole of the secreting structure had been broken down and discharged. The abscess had opened into the bladder, and its contents had no doubt passed away with the urine, but the opening had also admitted urine into the cavity; and hence the state in which we found the perineum.

Still it may be fairly matter of question whether stricture has so much influence as has been frequently ascribed to it in the production of diseased prostate. Like many other organs in the body the prostate has a tendency to undergo change in structure towards the decline of life; that tendency may be made more active in consequence of stricture, but even in the absence of other disease of the urinary organs, the prostate will undergo change: and when it does we have no certain means of controling it. We content ourselves by giving as free passage as possible for the urine, and attending to the state of the bowels.

Even before the prostate suffers in the way we have described, where the stricture is a close one, if an ejaculation takes place, some of the spermatic fluid is retained behind the contraction, and it then comes away with the urine. But where the stricture is not so close as to prevent the free passage of the seminal fluid, the irritation will sometimes extend along the seminal ducts, even down to the testicle, and will cause either tumefaction of the testicle or a frequent and involuntary discharge of seminal fluid. This discharge happens most frequently at night. I suppose this may be fairly accounted for by assuming that the seminal ducts become distended under this irritation, that during sleep this distension is felt, and that it determines the dream in that particular direction. When this state of things has existed for some time, a partial evacuation of the contents may happen without complete erection. And besides, if the existence of a certain quantity of seminal fluid in the ducts be the stimulus to that orgasm which causes its expulsion, in the end it ceases to be such a stimulus; the openings become relaxed, and the fluid passes off without the orgasm. Lallemand examined a case in which the openings of the ejaculatory ducts would admit a crow-quill.

I have now under my care three patients suffering from the seminal discharges consequent upon the existence of stricture. In one the excretion happens frequently at night, but the dream under which it is excited is always vividly impressed on his mind. In another the wet shirt is the only indication that it has happened. In the third it escapes during the efforts at stool or in making water; the patient being sensible of a particular feeling which informs him of what is about to happen.

Much suspicion certainly attaches to the nature of some of these cases: when a few drops of a viscid fluid pass only during the efforts at stool, or in making water, in many cases the fluid is not spermatic: if it be examined under the microscope no animalcules are observed in it.

A young man of 19 is at this moment under my care for "seminal discharges." At school, and up to the age of 17, he addicted himself to masturbation. For many months he has had sometimes every night, sometimes twice in a night, what he calls seminal discharges; sometimes he has discharges during the day. He is in good health, fresh coloured, the sexual organs quite natural, no redness about the orifice of the urethra. He is totally unconscious of the occurrence of these discharges during the night. When he awakes in the morning, he finds there has been a discharge; it may have been recent, his skin or his shirt being still wet, or it may have dried up; and there is the evidence. I do not say that the state of his health, and his general appearance, are a proof that they are not seminal discharges, but I can scarcely think that in a young man in rude health seminal discharges can happen under the circumstances I have mentioned, without consciousness on his part. Besides, if it were so, the first urine he passes afterwards should present spermatic animalcules, and in his case they have never been observed.

Some months ago we had an interesting case, shewing the influence of stricture in producing "seminal discharges." A young man presented himself with stricture, which followed upon an obstinate and neglected gonorrhœa. He had been treated twice for his stricture, by dilatation, but he never had patience to continue it so long as was necessary. Twice he had retention, which yielded to leeches and warm bath; still he would not take warning, although he bitterly complained of his disturbed nights from the frequent calls to make water. When he came to us he was much worn by suffering; he complained of uneasiness in the lumbar region, and the urine was turbid. He stated that through the whole of his suffering he had from time to time addicted himself to women; but that for many months the ejaculation was too sudden, and that it was followed by great depression. "At present the erections, when they occur, are very incomplete, and not sustained; the

urine dribbles away; it is thick and ammoniacal, and with it are some drops of a fluid resembling the spermatic fluid; a large viscid deposit takes place from the urine; this the patient conceives to be semen, but I conclude it is bladder mucus made ropy by the ammoniacal condition of the urine. It was evident that the most pressing evil was the state of the urethra; it was equally clear that nothing could be done for the seminal discharge until the canal was made large enough to examine it. As the water dribbled away in sufficient quantity to relieve the distension of the bladder, we determined to use moderate size bougies, and keep them in contact so as to melt down as it were the obstruction which existed. For some time we had little success, but after many attempts we succeeded in passing the obstacle. The jet of urine improved much from this time, and the quality of the urine; the lumbar pain gradually abated. Much uneasiness was still felt about the neck of the bladder, there was some pain in the testicles, there was a muco-purulent discharge, as well as frequent discharges of semen. At this time an attack of hæmoptysis occurred, and he was kept as quiet as possible, nothing being done for the urinary and spermatic trouble but the occasional passage of a bougie. When the chest disturbance became quiet, the urethra, from near the neck of the bladder to the curvature, was smeared with lunar caustic; the application seemed to be rather more than usually painful at the time, but the after sedative effect was very surprising. During the next fortnight there was no one spermatic discharge; but at that time another and more severe attack of hæmoptysis occurred, which carried him off in three days.

Some persons have maintained the opinion that in cases of stricture, under the irritation occasionally set up between the contraction and the neck of the bladder, the openings of the ejaculatory ducts may become blocked up. I never had the proof that such a thing may happen, and I know no one who has. In other secretory organs, one of two things will happen when the excretory duct is blocked up—either the organs shrivel up, and this is rare, or the secretion goes on, the ducts get distended, irritation is set up, and abscess may follow. When is such a state of things observed in the testicle?

When seminal discharges occur in persons who have stricture, whether those discharges have been induced by the stricture, or whether they existed before it was developed, the course to be taken at first is the same—the stricture must be dilated. In these cases you usually see the orifice of the urethra red and tumid; and the patient complains of frequent desire to make water, of pain in the perineum, and of great discomfort in the rectum. There is also a discharge from the urethra, which is aggravated by apparently very slight causes.

We had in this place not long ago a very good example of the influence of stricture of the urethra in producing mischief in the testicle. The patient was about forty years of age; he had a very close stricture; his urine only dribbled away; and he had a heavy dragging pain extending along the cord into the testicle. After many efforts, we succeeded in passing two strictures, and making the passage tolerably free; but nothing seemed to interfere with the progress of the irritation in the testicle. Fluctuation became manifest; an opening was made, and a quantity of tolerably healthy pus escaped. The urethra by that time was pretty free; but the irritation caused by passing a bougie kept up the discharge from the testicle; we therefore laid aside the bougie for a fortnight, when the discharge ceased, and the sore healed.

Occasionally we are obliged to intermit the use of the bougie because the testicle begins to be painful, even when the stricture is not very bad; and the large instruments sometimes introduced to crush calculi in the bladder are now and then attended by similar consequences, and in such cases the pain is felt to be extending along the cord towards the testicle. In such cases, as the irritation is not continued, the inflammation rarely proceeds to abscess.

In advanced cases of stricture the bladder does not long escape. The contained urine is expelled by a very attenuated stream, and the bladder is not emptied because the contraction cannot be maintained long enough to expel the whole; the desire to make water becomes more and more frequent, but the quantity passed is lessened. The muscular fibres of the bladder, so incessantly called into action, increase in size, and the cavity becomes smaller. The evacuation being at each effort incomplete—the composition of urine undergoing a corresponding change, becoming more and more acrid—it irritates the mucous membrane, and induces a secretion from it, which is deposited as the urine cools; and in aggravated cases it may amount to half or two-thirds of the whole of the fluid evacuated, but it does not adhere to the vessel. If the urine be alkaline, the deposit becomes ropy, and clings closely to the containing vessel. You have seen several cases in which the deposit presented this appearance.

After a time the irritation may extend to the ureters and the kidneys. In some cases, in consequence of the constant state of distension of the bladder, the ureters become greatly dilated; the pelvis of the kidney may

participate in this dilatation, and the kidney is not long proof against the consequent irritation. It becomes greatly congested; heavy lumbar pain is experienced; and abscess, or other complication, may be the consequence.

A man died a few days ago, and you had an opportunity of observing those organs after death. He was upwards of 50 years of age, and came in worn down by suffering consequent upon stricture. The desire to make water was frequent; the stream very small; the urine itself turbid. He also complained of uneasiness in the loins. We tried to dilate the canal, and we went on apparently very favourably. The stream increased in size; the desire to pass the urine became less frequent, and the fluid itself improved. His general health underwent a great change for the better. Suddenly he was seized with shivering; we examined the perineum, the loins, and the urine, but could detect nothing to account for it. Diarrhœa came on, but it yielded to ordinary means. He seemed to be shaking off his troubles when head symptoms came on, and he died apparently apoplectic. We found, after death, some, though not extensive, approximation to Bright's kidney, and not much diseased bladder.

Kidney disease, and even comparatively sudden death, are not uncommon consequences of advanced stricture, but the former it is not always easy to detect. In some cases, we may get bloody or purulent urine, shivering, lumbar pain, and fever; in others these signs may be wanting: and in one case which happened to us not long ago, there was no pain in the renal region; there was nothing unnatural in the urine; and yet the abscess which happened in the back was caused by the irritation of calculi which made their way out of the kidney. We have seen other cases in which there was much oppressive pain in the lumbar region, which quickly disappeared when the urethra became free.

In some cases of stricture I have found the urine albuminous, and as the excretion became freer, that fluid also improved. I apprehend, however, that before we can estimate at its proper value the existence of albuminous urine, we ought to make observations on a large scale on healthy persons. I have reason to think that if we took the urine from 100 children reputed healthy, we should find one or two albuminous. It may be said, that though apparently healthy they were not really so. I recollect a patient of Dr. Harrison's who had leucorrhœa, whose urine was carefully collected, but it yielded a larger proportion of albumen than any case I ever knew; yet she went out apparently quite well. I do not for one moment seek to disparage the value of albuminuria as a sign of disease; but I should be glad to see an extended observation of the urine of persons reputed healthy.

G. H. aged 53, had a stricture of long standing, very unyielding, very close; his urine had been for several years evacuated frequently, but during the greater part of that time never in a continuous stream. For much of that time it had been more watery and paler than natural. Relief had been sought on several occasions, but so soon as the stream of water improved in bulk under dilating instruments, he became careless, and discontinued his attendance. During the previous twelve months there had been occasionally uneasiness in the loins. On two or three occasions for a day or two something like pus had been deposited; it passed with the last drops of urine; latterly, in three instances the urine had been bloody, and it was this feature in the case that gave him alarm, and induced him to give his medical attendant a fairer chance of success. Dilatation was fairly employed, and without any other remedy, under the idea that the suspected kidney disease owed its existence to the contracted urethra, and that if a free passage for the urine were obtained the other discomforts would gradually disappear: the result fully justified the expectation, for as the urethra was enlarged the distress in the kidney region abated, and the patient is now free from any inconvenience in that region.

When stricture of the urethra becomes close, and much exertion is made by the patient to empty the bladder, the effort being frequently repeated, tends to produce a congested state of the viscera of the pelvis, and this is particularly felt in the terminating portion of the rectum. The gut may protrude at each effort, and become very congested, or it may suffer in the shape of piles. In either case the affection is distressing enough; it is no light matter to have the gut descending many times a day, though no difficulty be experienced in returning it; it is a serious evil to have piles tense and bleeding now and again. In such cases it must be evident to you all that no remedy applied directly to the gut itself can avail; you must, if possible, get rid of the necessity of straining at all; and this can only be done by restoring the urethra to its natural diameter. The disease of the gut may have existed so long as to require to be particularly treated; but then it may be devoid of complication, and will yield to treatment which would previously have failed.

MISCELLANEOUS

CONTRIBUTIONS TO PATHOLOGY AND THERAPEUTICS.

By James R. Smyth, M.D. London.

(*For the Medical Gazette.*)

Rickets—the causes predisposing, exciting, and proximate of the affection—an illustration of morbid etiology in the development of consumption and of typhus fever—rickets and scrofula identical in their causes and natures—this illustrated by cases—treatment of rickets—the plans of treatment of Boerhaave, Sydenham, Van Sweiten, Boyle, some Italian physicians, and others.

The scientific, and therefore most practical observer of and prescriber for disease, forms, or should do so, his diagnosis *à posteriori*, and his prescription *à priori;* that is to say, from the general assemblage of symptoms and morbid phenomena which in any case present themselves to his observation and judgment, he determines as to the natnre and name (if any) of the disorder or disease; and, pursuing his clinical scrutiny and investigation still further, he endeavours to arrive at, and to comprehend, its proximate cause; towards the removal of which he designs and directs his remedies and treatment.

This applies, of course, to the conduct of the well-informed physician or surgeon, more particularly when the object of his therapeutic measures is the effecting of a cure: but when, from the nature of the malady under which the patient labours, such is impossible and impracticable, the aim of his prescriptions and therapeutic expedients, whatever they may be, can only be toward palliation of symptoms, and more or less improvement of condition; or perhaps to lighten and appease the last painful stage of life's weary journey and approach to "the undiscovered country from whose bourn no traveller returns."

Morbid etiology generally, and properly, resolves itself into three kinds of causes, namely, *predisposing*, *exciting*, and *proximate*. This division might appear somewhat refined and artificial, but such is not the case, as it unquestionably has its full existence in fact. Let us adduce an example in illustration of the entity and too frequent mode of operation of these three causes; and we will choose the case of one of the many delicate and interesting—in some instances, indeed, too interesting, because too delicate—young ladies who constitute the beauty, life, and joy, and attractive captivating ornament and charm of society, in all its variety of better relations in this great metropolis, and every where else. We will choose, we say, the case of one of these young ladies, destined, through hereditary consumptive diathesis, and the changeable ungenial nature of this northern climate, aided by erroneous unhealthy educational and social arrangements and customs, to fall, like some tender early flower nipped by cold, a victim to the malady of phthisis. The hereditary diathesis, or specifically ill developed and organised state of the fluids and solids, then, in such instance, forms the predisposing cause, the ungenial atmospheric agency the exciting cause, and the tubercular matter deposited in the lung the proximate, sustaining, or constituting cause. Or, let us take a case somewhat different, but one equally in point, that of the outbreak and spread of typhus and contagious fever in a population suffering from insufficient or unwholesome food, and other not unfrequently accompanying privations. The diminution and defect in the quantity of the blood, with its impoverished vitiated qualities and condition, and the concomitant resulting depression and debility of the circulation, and of the entire economy, form here the predisposing cause. And, under such circumstances of predisposition, an unusually severe impression of cold, the more than ordinary exhaustion and fatigue consequent upon a toilsome day's labour, or more or less unusual privation of diet or sleep, or some event which gives a depressing shock to the mind and spirits, or, when the fever proceeds from contagion, the reception of the animal or vegetable *miasm* into the circulating fluids and system, and its impression and injurious effects thereon, form the exciting cause; the peculiar, perhaps specific, morbid change and derangement of its vital affinities and constitution which the blood undergoes, and which originate and continue the febrile state and phenomena, form the proximate or sustaining cause. "That," truly and elegantly observes Van Sweiten, "is called the proximate cause of a disease which directly constitutes the whole present disorders, the presence whereof founds and continues the disease, and the absence of which removes it."

In the etiological pathology of rickets, the predisposing causes of the malady, like those of scrofula and consumption, are chiefly referrible to hereditary taint and organisation. When, as sometimes is the case, the disease becomes developed in the system of the child, not the offspring of strumous or otherwise debilitated parents, it is difficult, and, indeed, unnecessary and useless, we think, to draw any distinction between the predisposing and exciting causes, as these are, in fact, the same morbific agents, which would appear to differ only as to the times and greater or less intensity of their mischievous actions. When a congenital strumous and rickety diathesis exists, a shorter and less rigorous operation

on the infantile system of those causes which ordinarily act as the excitants of the disease, which we shall presently enumerate, are sufficient to quicken the malady into life and form.

And, on the contrary, where such diathesis or physical predisposition does not exist, but when the affection, like an isolated case of typhus fever, is altogether the offspring of contigent and external circumstances, a longer and more severe operation of those morbific agents are, generally speaking, requisite for the production of the disease.

That scrofula and rickets are, as we have already observed, distempers identical in nature, though somewhat different in their symptoms and forms, there cannot, we conceive, be a doubt; and that a scrofulous condition of the economy in either parent may, and does, according to modifying circumstances, act as a cause either of a like malady—that is, of scrofula properly so recognised, or of rickets in their offspring—there is sufficient evidence to verify. We have witnessed in the family of a respectable artisan, the father of ordinary stature, of active constitution, and free from every kind of debility and disease; the mother of large person and leucophlegmatic temperament and form, with tendency to a strumous state of the lymphatic glands generally, but without any particular scrofulous ulcer or tumor; one son, thirteen years of age, who inherited the temperament and constitution of the father, robust and in every respect healthy; another son, between eight and ten years old, the subject of severe scrofulous diathesis and debility and scrofulous enlargement and ulceration of the submaxillary glands, and also of the lymphatic glands on the side of the neck; an only daughter, fourteen, stunted in growth both of body and mind, of large head and abdomen, of bowed legs and arms, and twisted deformed spine and pelvis, of soft infantile flesh, and stupid lax countenance; in short, an unquestionable example, in every symptom, of the malady of rickets. There would appear to be a great defect in the power of developing animal heat in rickety individuals. This dwarfed and deformed creature, although she could walk and run in a straddling unsteady manner, generally sat, like some stray and disabled elf, during the autumn and winter, the vigilant guardian of its own hearth, and the warmer and brighter the fire the more pleased and animated it seemed to be. We have witnessed again, in one family, the father the subject of scrofulous enlargement and ulceration of the ankle-joint, and bones of the tarsus, a son, nearly arrived at the age of manhood, labouring under scrofulous necrosis of the lower third of the femur, and also of the middle third of the connected tibia; one daughter, beyond twenty, strong and healthy; another daughter, between a year and two years younger, rickety, and curved and deformed in various ways. The mother died of ovarian dropsy, resulting from scrofulous disease of the ovarian bodies. In a medical controversy, upon perfect and imperfect rickets, held at Strasburgh ninety years ago, or a little less, by Buckner, that celebrated author adduced the case of a female of the labouring class, the subject of "king's evil," scrofula, who was mother of eleven rickety children, all begotten by the same father, a man remarkably healthy both before and during the time his family was increasing. Boerhaave, in one of his aphorisms, treating of the etiology of rickets, states to the following effect, and nearly in the same words: this disease is chiefly fatal to children whose parents are of a lax weakly constitution, are indolent and delicate, who live luxuriously, who eat little bread, drink sweet wines, and much warm water; who have been exhausted by chronic diseases, generative intemperance, age, and particularly if they have had the lues venerea and frequent gonorrhœas, for such generally propagate a weak and languid offspring.

Although such pathological doctrine is not, we believe, generally taught, repeated attacks of gonorrhœa and long-continued gleets have certainly the effect, in not a few instances, particularly in the male, of greatly depressing the spirits, and of relaxing and softening the solids, and also of weakening in no inconsiderable degree, temporarily or permanently, the entire system and constitution. The offspring of an individual labouring under such debility of system is very likely, no doubt, to be weak, and disposed to disease, and most of all to the distemper of scrofula in some of its different forms. In some constitutions that have experienced repeated attacks of gonorrhœa terminating in lingering gleets, the hair loses its softness and healthy appearance, and becomes dry and falls off. We have ourselves witnessed two cases of this peculiar depilation; a symptom, we conceive, of profound constitutional injury. In one of the cases there was also falling off of the eyebrows, with disfiguring permanent dwarfish regrowth of the parts. Dr. Macartney, the late Professor of Anatomy and Surgery in the University of Dublin, one of our most acute observers, and a profoundly learned physiologist and pathologist, was accustomed, we believe, occasionally to direct the attention of his numerous pupils to this remarkable fact.

The causes from which the malady of rickets is generally considered immediately to derive its existence, and by which, whether with or without a predisposition in the economy, the *essentia morbi* and its external characters are generated (if we may use the term) and developed, and in consequence of

which they are denominated its exciting causes, are referrible, chiefly or altogether, to the condition and circumstances of the child as regards aliment, air and exercise, habitation and cloathing, and exposure to wet, damp, or cold.

In every case of rickets which has come under our observation, the system of the individual certainly had been, or was being, subjected to the unsalutary agency of insufficient and unwholesome nutriment, in the form of breast-milk, or food artificially prepared; its habitation was generally damp, cold, and confined, and excluded in a greater or less degree from the due influence of the sun; the nursing and physical education of the child was negligent and bad, it being seldom in the free insolated air, and sometimes but scantily cloathed. The following observations on the etiology of rickets, which we extract from the article on this malady in the Dictionnaire de Médecine, are, we consider, so sound and excellent, that we cannot do better than give them a place here:—

"Laissant donc de côté les hypotheses, pour ne nous arrêter qu'aux faits, nous avouerons franchement que la cause du rachitisme nous parait totalement inconnue. Le principle de cette maladie se développe spontanement chez certains individus qui y sont plus disposés que d'autres par leur constitution. C'est ainsi qu'on voit souvent tous les enfans d'une même famille devenir rachitiques, que cette maladie se transmet à une ou deux générations, et que cette disposition héréditaire s'affaiblit, soit par le croisement des races, soit par le changement de régime ou d'habitation. Pour les individus chez lesquels cette disposition primitive est cachée et existe déjà, plusieurs causes secondaires peuvent concourir a développer la maladie: ainsi le travail de la dentition, l'affaiblissement de la constitution à la suite de plusieurs maladies aiguës et chroniques, deviennent autant de causes occasionelles de rachitisme. L'habitation dans des pays humides parait aussi favoriser le développement de cette maladie. C'est principalement en Hollande, dans le nord de la France et en Angleterre, qu'on l'observe plus fréquemment. Elle était tellement repandue dans ce pays, vers le courant du seizième siècle, qu'on lui avant donné pendant un certain temps le nom de mal Anglais; c'est surtout dans les grandes villes les plus populeuses, à Londres, à Amsterdam, à Paris, que le rachitisme s'observe plus frequemment; il est plus rare dans les campagnes, dans les bourgs, que dans les grandes villes. Un mauvais régime alimentaire parait contribuer à favoriser son developpement. Les enfans de la classe inférieure, qui sont très-mal nourris dans les grandes villes, y sont en general plus sujets que ceux de classes élevées, quoique ceux-ci n'en soient point exempts."

"Leaving aside, then, hypotheses, to confine ourselves to facts, we frankly avow that the cause of rickets appears totally unknown to us. The seed of the malady is spontaneously developed with certain individuals, who are more disposed to it by their constitutions. Thus it is that we often see all the children of the same family become rickety, and this malady transmit itself to one or two generations, and again this hereditary disposition becoming weakened either by intermarriages or by change of regimen or habitation. With those individuals in whom the primitive disposition is concealed, and still exists, many secondary causes may concur to develop the malady; thus the pain and disturbance of dentition, the constitutional debility consequent upon many acute and chronic direases, become as many occasional causes of rickets. Habitation in damp countries appears also to favour the development of this malady. It is chiefly in Holland, in the north of France, and in England, that we observe it most frequently. It was so prevalent in this latter country during, or towards the end of the sixteenth century, that, for a certain time, they had given to it the name of the English disease. It is principally in the great and most populous cities, such as London, Amsterdam, and Paris, that rickets is observed most frequently. It is more rare in the country and towns than in the great cities. Unwholesome aliment appears to favour its development. The children of the poor, in the great cities, who are very badly nourished, are in general more subject to the disease than those of the higher classes, although these are not exempt."

The damp and cold, and other atmospheric agencies of marshy and maratine localities, are considered by many to operate with peculiar effect as exciting causes of rickets. The disease was very prevalent at one time in Halle, in Saxony, owing, it was thought, to the very moist and unhealthy state of the atmosphere of the town, resulting from saline and carbonaceous exhalations suspended in it. Like some other maladies which occasionally exhibit an endemic character, rickets has been viewed as a disease caused by, and propagated by, contagion; but such an opinion we do not consider to have any foundation in fact. Sydenham has observed that the rickets—"true rickets*," to quote his own distinction,—was most common, in his day, in those seasons in which autumnal inter-

* Sydenham, it would appear, made out two sorts of rickets — one true, the other false. The latter, we apprehend, was nothing but infantile atrophy, with mesenteric or some other abdominal disease.

mittents prevailed; and it would seem that he was disposed to consider the intermittent fever as the originator, in a great degree, of the rickets.

It is difficult to determine respecting the proximate cause of rickets. The blood and humours in this disease, it is certain, early discover deterioration of their qualities and constitution. But the blood and circulating fluids generally—are they not, let us ask, at all times chiefly dependent for their existence, and the conditions of the same, healthy or unhealthy, on the functions and operations of the chylopoietic viscera and other organization of digestion? No question but such is the case. "During the whole course of this disease," observes Boerhaave in one of his aphorisms, "a slow fever consumes the body until death; and then all the fibres, membranes, vessels, and viscera, appear soft and flaccid, the humours dissolved; so that we may conclude the proximate cause of this disease to be a sluggish, cold, and vapid cacochymy, together with a very loose structure of the solid parts." To this doctrine of the proximate cause of rickets Van Sweiten also gave his approval; and Du Verney, Buchner, and others, state that the blood of ricketty children is dissolved, thin, and watery, and the flesh greatly decolourised.

Some authors, it is but proper here to state, as Bonetus, the learned Heister, Glisson, and others, have asserted that the medulla oblongata, in rickety subjects, is found to be unusually hard, and apparently obstructed; from which circumstance the proximate cause of the disease has, by some, been placed in impediment to the free passage of the nervous fluid or cerebral influence into the spinal marrow, and thence into the trunk and extremities.

Treatment.—The first thing to be done in the treatment of this disease, or indeed in that of any other, is to rid, if possible, without delay, the individual from the influence and operation of its exciting causes. Though these, in the malady under consideration, may, as we find they do, according to circumstances, vary in degree of action and morbific effect, and though they may therefore, in some manner, modify and vary the external phenomena of rickets, the distemper is, however, we believe, essentially a disorder of infantile digestion and general nutritive and organic assimilation. If lingering feverishness and debility, with symptoms of rickets, such as we have described in a former paper, begin to show themselves in a child while at the breast, the health of the wet nurse should be immediately inquired into, and her milk examined, and, if not found wholesome and nutritious, a new nurse ought to be provided for the child, who might afford it the necessary salutary aliment*. Without question, every infant, with a few rare exceptions, should be gradually weaned as soon as it has attained the age of nine months, as suckling it, and encouraging it to subsist altogether or principally on fluid nourishment after that period, is more a cause of physical relaxation and debility than of tone and strength to its digestive economy and constitution. Protracted suckling, in fact, is looked upon by many, and with some reason we think, as a frequent cause of rickets. We are undoubtedly too frequently in the habit of neglecting the sound and certain dictates of nature. The child, every one knows, usually begins to cut its teeth when it is seven months old; and the object, plainly enough, of the development of the teeth is to furnish the little aspirant for man or womanhood with instruments for the mastication of more solid food, which should be presented to it, in more or less quantity, as soon as the teeth have made their appearance. If dentition happen to be difficult, and thereby prove a source of pain and irritation, and of disturbance of the child's digestion and health generally, the protrusion of the teeth should be facilitated by incision of the gums.

In the early and acute stage of rickets, when the febrile symptoms are considerable, and we have acceleration and resistance of pulse, with fretfulness and anorexia, and dryness, or tendency to dryness, of the skin, with more or less disorder of the alvine and urinary excretions, some hepatic alterative aperients, consisting of calomel or hydrargyrum cum cretâ, with rhubarb, in the form of a powder, and a mixture composed principally of compound infusion of senna, with carbonate of soda and sulphate of potash, together with antimonials and the tepid bath, should be administered, and repeated as indications might prompt. The object, let us state, of the mercurial and alkaline medicines here advised is to urge and render active the biliary secretions, and emulge the liver, which viscus, we apprehend, is, to a greater or less extent, implicated in the etiological pathology of rickets, and, as we have seen, is liable, in an early or late stage of the disease, to become, in a greater or less degree, congested and enlarged.

With increased bulk of the head, when symptoms of cerebral excitement and cerebral congestion and oppression are present and

* "Milk contains only one nitrogenised constituent, known under the name of *caseine;* besides this, its chief ingredients are butter (fat), and sugar of milk. The blood of the young animal, its muscular fibre, cellular tissue, nervous matter, and bones, must have derived their origin from the nitrogenised constituent of milk, the caseine; for butter and sugar of milk contain no nitrogen." (Liebig's Animal Chemistry, second edition, page 51.)

urgent, a cold lotion ought to be constantly applied to the head, and one or two leeches, or perhaps more, as symptoms might suggest, should be applied to the forehead, or to the temples, or post-aural regions. In the time of Glisson, scarification of the ears, indeed, was a remedy much relied on, and generally practised, in this country in the treatment of rickets; no cure of the disease, it is said, being confidently expected without its adoption. As soon as the symptoms of febrile excitement, and of cerebral disturbance, have somewhat subsided, and the derangement of the digestive functions has been put in some degree to right, and the malady is beginning to assume a chronic character, the child ought to have daily, with its other diet, milk, or whatever it may be, animal nutriment, properly prepared, and in quantity suited to its age, and its digestive powers. Change of habitation is also very requisite. If a rickety child, as too many of them are so situated, be living in a damp, cold, secluded, ill-aired, and worse lighted place in town, or in a low, unhealthy locality in the country, it should be removed to a residence affording hygienic conditions and influences different and more salubrious; and, being warmly cloathed, and carried in an easy position in the nurse's arms, or in a carriage, it ought to be as much as possible, when the weather might permit, in the open sunny air. It is a custom (which experience of its good results has no doubt rendered customary) in some parts of the continent, with parents who have rickety children, to expose them frequently to the warm sun, on dry sandy eminences, in fine spring weather. There is, it is certain, no immediate cure, and but little amendment, whatever medicinal remedies we may prescribe, to be expected for the child labouring under the cachectic chronic disease of rickets, so long as it is kept cooped up within doors, and fed principally on sloppy vegetable and farinaceous aliment; it ought to have air and exercise daily immediately after breakfast, and again after an early dinner, between 1 and 2 o'clock, when cold or rain did not forbid, and animal food of the younger sort, the best of its kind—beef or mutton, or veal or fowl, or ham, plainly cooked, in moderate quantity, twice a day. During the employment of these remedial dietetics, it may also be necessary to keep the intestinal canal, and its functionally associated glandular viscera, the liver in particular, gently active for a time, by means of some alterative aperient, administered daily or every other day, according as the condition of the alvine excretions might suggest; which it may also not unfrequently be found beneficial and contributive to the cure, to follow, by the use, twice a day, in small rather than in large doses, of some chalybeate medicine, the carbonas ferri, or the tinctura ferri muriatis, or the vinum ferri, for instance. The following is the substance of the therapeutics for the treatment and cure of rickets of the celebrated Herman Boerhaave:—The malady of rickets is best cured by a light, dry, diet of animal food, not fat, of easy digestion, and seasoned with the mildest spices, given often, but in small quantity; by generous liquors, drank in moderation, especially fresh beer well brewed; by a dry and warm air, and warm clothing; by sleeping upon mattresses filled with aromatic strengthening herbs, placed in the highest and driest apartment in the house; by tossing, shaking, swinging and dancing them, and by having them borne in a carriage over stony rough ways; by repeated warm dry frictions with flannel impregnated with the smoke of aromatic gums, principally applied to the abdomen and spine; by gentle emetics given with caution; by purging for some days successively with rhubarb, or some other aromatic cathartic; and lastly, by a long-continued use of strengthening and cordial medicines. The cold bath and liniment are also mentioned, but without experience as to their effects.

In the treatment of rickets, Sydenham appears to have placed his confidence chiefly in purgation. "According to the age of the child," observes Sydenham, "give it a spoonful or two, more or less, of the purging potion above set down* every morning for nine days, intermitting a day or two, if need be; and the purgative must be so proportioned, either by increasing or diminishing the dose, as to give but five or six motions a day. When the course of purging is over, let the abdomen be anointed with an opening liniment for some days. By this method I have cured several children of the true rickets."—(Sydenham's Works, by Swan, page 64.)

Several medicines of chalybeate and other natures have held considerable repute for a time, and have had the confidence of eminent individuals both in this country and on the continent, as agents exercising a specific control over rickets. The great and philosophic Robert Boyle introduced as a specific against this malady the now antiquated medicine known by the name of *ens veneris*†.

* The following is the prescription for the purgative potion here referred to, which was the same also that our English Hippocrates was in the habit of administering to his patients in continued fever:—

Infusi Sennæ, Infusi Rhei, aa. oz. iss.; Tamarindi Indicæ, oz. ss.; Mannæ, Syrupi Rosæ, aa. oz. j.; M. ft. mistura.

† There has been some difference of opinion amongst pharmaceutists and others respecting the true nature of *ens veneris*. Some will have it that it was a preparation of copper, others of iron. We are of opinion that it was a preparation of iron, the *perchloride*, which is not, we believe, amongst the medicines of any of our pharmacopœias.

"Partly by a sister of mine, to whom I communicated it, and partly by myself, and those I directed to take or to give it, I think I may safely say," states Boyle, "that two or three hundred children have been cured by it, and that almost always without the help of any other inward medicine, or using any topical application at all." (Boyle's Works, vol. v. p. 124.) The usual dose was two or three grains (which could be increased to thirty without any ill effects) given in distilled water, small beer, or any convenient vehicle. Van Sweiten observes, that when this remedy caused a sensible increase of perspiration, and of urine, it operated as a certain specific against the rickets. Benevoli, also, has given his testimony to the beneficial effects of ens veneris in rickets; and in proof of the same, has related, in his writings, several cases of cure produced by it, one of which, indeed, we quoted at length in our last paper. Van Sweiten speaks in high terms of the good results he has witnessed from "golden tincture of steel" (muriated tincture of iron of the modern school of pharmacy) administered as a remedy for rickets. He states that he cured numbers of rickety children by feeding them on biscuits and mellow generous beer, and giving them, at the same time, three or four drops of this tincture twice a day in a little wine. Zaviani used the same remedy for rickets; and so, also, did Benevoli, who administered it in milk. De Haen gave the ostracodermata (of Aristotle) in fine powder, in scruple doses, two or three times a day; and he states that if the rickety children using this medicine enjoyed the benefit of a warm sun in the country, of exercise in a child's coach frequently during the day, and of a dry bed and chamber, with sound aliment, they were soon cured. Hemlock and madder, too, have had their commendations as remedies for rickets. We find cases related by writers on this malady, in which the former of these medicines was given to young children to the amount of four and six grains a day, with, as they state, the best results. We do not ourselves, we confess, put any confidence in hemlock or madder as remedies for rickets.

It is better, we believe, while the bones of rickety children are soft and liable to contract curves and deformities by efforts at standing and locomotion, to confine these little patients as much as possible to the horizontal position, as well while they are being borne about in the nurse's arms, or in carriages, as when they are in bed. But with all the care by the most careful, in this respect, that may be taken of rickety individuals, it is perhaps impossible, in many cases, to prevent some of the long bones, and the chain of vertebræ of the spinal column, from becoming morbidly bent and deformed. Wherever there is any considerable degree of rickety or scrofulous taint, with its peculiar accompanying debility in the system of the infant, or young growing individual, it seldom fails to manifest itself by some kind of curvature or deformity of the spinal column. It is certainly the bounden and imperative duty of every parent or other responsible person to whom the care and welfare of weak and rickety children are entrusted, to do all in their power in every way to prevent them from becoming deformed, and disabled, and distorted pitiful objects, often disagreeable and painful to behold, as many of them we almost daily see about the streets and lanes of this city are. And we will observe, that, for such purpose, in aid to the medicinal treatment, we are not disinclined to think but that benefit and assistance, sometimes considerable, may be derived from the judicious application of mechanical means, which, it is scarcely necessary to remark, is more the part of the surgeon than of the physician to devise and apply. If not trespassing on the field of the veterinary physician, before concluding for the present the subject of rickets, we will remark, that this malady, like that of scrofula, is not one exclusively confined to the human species; some of the inferior animals are also liable to be attacked by it. The disease may occur in the monkey, lion, horse, ox, and in the sheep, pig, and dog, more particularly the pointer and greyhound, and also in geese and ducks. We have ourselves seen the disease of rickets in the terrier, the turkey, and peafowl.

We intend, in our next paper, to resume the subjects of impotence and sterility, and to continue them, without interruption, till terminated; and we hope to be able to place before the profession and the public some facts and cases deserving of their attention and consideration.

43, Sackville Street, Nov. 30, 1843.

REMARKS
ON THE
IMPUNITY OF CERTAIN ATTEMPTS TO MURDER,

By T. Mayo, M.D.
Fellow of the College of Physicians, and Physician to the Marylebone Infirmary.

[Concluded from page 305.]

I have endeavoured in the above reasoning to obtain points of distinction, which may enable us to apply to the defence of mankind against injurious acts performed by the insane, that power which the insane are known to possess under certain limitations,

and in certain kinds, of controlling, from prudential or other motives, their own tendencies; that power which, under the improved management of the present age, is so often employed for their benefit, and often for their cure; and which in these instances might be exhibited in so far limiting their delusions as to render them compatible with the peace of society. Occasional difficulties must arise in regard to this as well as to every other class of offenders, in applying penal principles. General rules must occasionally apply a pressure too stringent at some point. But in this case, it must be remembered that the interests of the insane are as deeply involved as those of the public. It is, indeed, a most oppressive infliction, though one by no means preventive, because it does not come in the shape of a punishment, which the insane incur under our present system. We wait, for instance, until they have committed some murderous act, and then inclose them in a madhouse for life. (See Appendix, No. 3, p. 336.) Had the friends of Macnaghten viewed him as liable to a *penal* infliction, in case of an outbreak against society, of which he seems to have given them ample notice, it is reasonable to presume that some means of cure or prevention might have been resorted to by them.

In Macnaghten's character murder *was* probably, in some sort, as Dr. Monro termed it, the crowning point or climax to which his delusion tended. In a milder or more kindly character, the blood of the offending party would not have been pointed to as requisite, or the requisition would not have been listened to. Again, had insanity occupied the whole character and conduct of Macnaghten in relation to his fatal act, a circumstance practically disproved by his deliberateness, he would have afforded no preventive example to others by his punishment, and that punishment would have been gratuitous. Such as he was, had punishment been awarded to him, he would have afforded an invaluable example to thousands of ill-regulated minds, in which a seed of insanity springs to life in a hot-bed of evil passions, or wayward dispositions, or over-stimulated imagination (See Appendix, No. 4, p. 336), while the impunity accorded to the name insanity places at the disposal of their passions the means of their gratification. It is in this way that Sir Walter Scott exhibits the effect of a false perception on the feverish and impassioned character of Allan Macaulay*. Could it have been possible that the peeps into futurity with which the good Emanuel Swedenborg indulged *his* imagination, should have armed *his* hand against the friend of his heart?

The dangerous effect on the insane of allowing them to consider insanity a ground of exculpation, under whatever circumstances it may be pleaded, has been illustrated by a reference to a conversation between the patients of an establishment near York, in which they were overheard declaring, that Martin the incendiary would not suffer any penal consequences from his act, because (they said) "he is one of us." To the argument in favour of the punishment of insane persons, founded on this fact, it has been replied, that the insane are, as such, unaware of their own state, and consequently will not be influenced by the escape or punishment of other insane persons. And this reply would be a good one, if its assumption were correct, that they contemplate the other persons as insane. But this assumption is erroneous. Those whom they recognise as actuated by motives and views similar to their own, they regard equally with themselves as of sound mind, and only (as an insane lady once described herself to me, when I was pointing out the deviations of her conduct) "in a minority."

The reference of insanity to conduct varies in relation to the mind in which it occurs, and the extent to which it has influenced a given mind. In some persons it spreads, as it were, through every fibre of the character; in others it taints the character with erroneous impressions, but leaves the agent free to deal with these impressions, in regard to the conduct which they suggest, according to the general construction of his mind, and the extent to which they are antagonised.

In the case of Bellingham, affidavits were put in, stating that if more time† had been given before his trial, evidence establishing some features of

* Legend of Montrose.

† Bellingham's crime was committed on the 12th of May; he was tried on the 15th.

monomania would have been obtained. In this case Bellingham would probably have escaped, though, on the grounds on which *we* would have awarded punishment to Macnaghten, obviously deserving it.

In the murder of Mr. and Mrs. Bonar, at Chislehurst, the confession of Nicholson, evidently made with no purpose of trumping up a story of lunacy, bore strongly the character of an attack of homicidal monomania; and had not this supposition depended entirely upon a statement made by himself, it is very probable that circumstances confirmatory of it would have been sought out; in which case the murderous villain, if assisted by able counsel, would possibly have escaped into a madhouse, and an important preventive example have been removed from the public eye.

There were points of eccentricity in the character of Lord Ferrars, which, in the present day, would have made his chance of escape a very good one. Lord Ferrars was, in truth, of unsound mind; but his unsoundness belonged to a species of that great genus (a species distinct from insanity), which ought to confer no immunity from punishment. He was eminently and exquisitely a brutal character (See Appendix, No. 5, p. 336), as described in the work to which this essay is supplementary—a man without a moral sense: fear could alone have controlled him; and it was evident that his intellectual powers were sufficiently vigorous and clear to have estimated the nature and chances of punishment, and to have contrasted it with the pleasure of gratified revenge.

Macnaghten himself expressed, in a conversation between him and his medical advisers, which my friend Mr. Maclure reported at the Harveian Society, that he should not have "liked to be hanged for his attempt on Mr. Drummond's life." But he also said, that he felt sure that the Duke of Wellington would not hang him. In fact, the strong indisposition evidenced in the present day to inflict capital punishments, and the uncertainty thus produced, give to many offenders a dangerous reliance on escape.

Some very mischievous escapes have taken place under the vagueness of our law in its application to this subject. It has, indeed, been penal or exculpatory just as the case might chance to influence the sensibilities or the reason of the jury or magistrate. The impunity of the officer who attempted to assassinate Lord Palmerston is one of these cases. And such also was the case of Miss Broadrick, who murdered Mr. Errington. In drawing a distinction between her case and that of Hadfield, Mr. Erskine very justly argued, that Miss Broadrick acted in reference to circumstances which had a real existence, as well as under the influence of those passions and motives which are naturally excited by such circumstances. He saw no connection between her case and insanity; and was of opinion that she ought not to have been acquitted. In the Annual Register of 1795, in the report of that case, Chief Baron Macdonald, before whom it was tried, is noticed as having considered the laughter of Miss Broadrick, after her commission of the horrid deed, as an evidence of insanity, and to have charged the jury to that effect. "Moody madness" is indeed described by the poet as "laughing wild amid severest woe;" but the Chief Baron should have considered that these latter expressions scarcely describe the state of feeling produced in an ill-regulated mind by gratified revenge. Miss Broadrick had punished the man by whom she had been deserted, in the presence of her for whom she had been deserted—a very sane procedure, though a very shocking one.

Assuredly the case of Oxford would also find a place in the above number. This young man was plainly capable of appreciating his own offence in relation to the laws of his country, and his general knowledge of right and wrong was equal to that which we have attributed to the felon, whose case we supposed at the commencement of this essay. His punishment would have acted most beneficially on the fears of others. Whether in favour of the weak-minded, whose acts are not characterized by sufficient deliberation to entitle them to the awful punishment of death, some other punishment might not be devised of greater preventive efficacy, as being, from its less severity, of more certain application, is an important question. The *entire* escape of Oxford was confessedly most mischievous.

That the extracting grounds and

motives for penal measures out of a theory of desert and moral responsibility, or, in other words, of justice, is unattainable by human legislation in any class of offences, has already been noticed. But this matter deserves to be reconsidered. Justice, in its sense of securing to every man his due, may be considered in two great relations; either as regulating the dealings of mankind with each other, or as correcting the offences which they commit against each other. In the first of these relations, the abstract theory of justice, the giving every man his due, is carried out, or nearly so, in practice. In its second relation, with the present endowments of the human mind, the realisation of justice in our practice is not equally easy. Some aids it no doubt possesses in the construction of our minds. The feeling of indignant emotion was no doubt imparted to us as a guide towards punishment, viewed as an act of justice. Still the appreciation of the grounds on which, and the extent to which, that feeling may act, is vague indeed, in comparison with the precision with which the contracts and exchanges of distributive justice are carried on. Man was made to live with his neighbour, not to punish him. But the account of our misdeeds cannot be carried over entirely to another state of being. We are compelled to inflict punishment, and compelled to do this on a principle, mainly, of prevention; still, in doing this, we anxiously crave the nearest possible approximation to a principle of justice, and desire that although prevention must be the immediate motive of penal inflictions, a theory of desert should be the measure of their severity; insomuch that the preventive force of punishment will be greatly increased in proportion to the extent to which the admeasurement of the punishment gratifies this appetite, and avoids the semblance of injustice.* Indeed, unless this precaution is used in the admeasurement of punishment, it will become a dead letter. The sympathies of mankind will resist its enforcement. The extent to which an amended consideration of the subject might in some cases mitigate punishment, without doing it away entirely, is not at present before us. The valuable act, passed July 1842, for the further defence of Her Majesty's person, may be considered an instalment towards this kind of legislation. For it was produced by the delinquency of a wretched boy, whose presumed unsoundness of mind protected him against the operation of those existing laws to which his act was *primâ facie* obnoxious. The place into which the lunatic criminal is received after conviction should not in a general way be that in which the innocent lunatic is detained; it may very fitly take the name, and some of the habits, of a prison. This would be a fair opening in this class of cases for what Mackintosh calls reformatory punishment.

I am not advocating severity of punishment, but merely demanding that the consequences of offences against the community committed by the insane, when the punishment *primâ facie* awarded by law appears unfit, as revolting to our sense of justice, may in certain cases assume to them the character of a punishment in some form or other;* and not be wasted, as at present, in unproductive suffering. Let it, indeed, be remembered, that the treating them in all respects, as far as possible, on the same principles with rational beings, as subject to motives and capable of being influenced through hopes and fears, is good for them, as well as for society at large; though actions some way connected with delusions *may* thus be made the subjects of punishment. Under an opposite system they will still receive, with a different name, a very heavy punishment. Thus, a partially insane person, incarcerated in a mad-house for life on account of a murderous act springing out of his delusions, is actually in a very wretched plight. His state has all the attributes of a most bitter punishment, except those which tend to prevent a repetition of the offence in others. Soon,

* This concession in favour of the introduction of other objects, besides prevention, as recognized by law, is more than that truly humane philosopher, Sir James Mackintosh, demands. "The object of law," he says, "is the prevention of actions injurious to the community. It considers the dispositions from which they flow only indirectly, to ascertain the likelihood of their recurrence, and then to determine the necessity of means for preventing them."—*Ethical Philosophy.*

* See Appendix, No. 6, p. 337.—A brief statement of a case tried on the 31st of October last, before Mr. Justice Maule and Mr. Justice Wightman, will there be found, which forcibly illustrates these views.

indeed, he is shut out from the thoughts and recollections of man; or, if recollected by those who ought to profit by his sufferings, he is only recollected as one who has plenty to eat and drink, and nothing to do!

Unless the perverse rhetoric of the philanthropist should occasion a reaction of public feeling in an opposite direction to that which they advocate, there is no danger that penal measures should be carried out against the insane with undue harshness, in the present day.

I have thus endeavoured to ascertain the principle on which the plea of mental unsoundness may be applied in exculpation of criminal acts. The practical questions which I suggest on this subject are, first, whether the insane offender is aware at the time of commission of the nature of his act in reference to law; secondly, whether, though aware of the state of the case in this respect, he is in a condition to be withholden by that knowledge from the offence.

The first question answered in the negative will at once place him out of the reach of punishment.

In estimating the second question, in each case as it arises, I assume the same ultimate grounds of exculpation as under the first question. In each a state of present insanity, connected with the criminal act, and rendering the threat of punishment inoperative, constitutes the plea in behalf of the offender.

I have endeavoured further to point out that although a bare perception of preventiveness or non-preventiveness in punishments proposed must be the basis and motive of our legislation on the subject, no violation of our rational and manly sympathies is hereby suggested. No doubt difficulties must be felt in applying the distinctions and limitations required. But is this application impossible? Is not this very difficulty connected with a certain faultiness in our judicial arrangements, which seems to leave the subtle question of mental unsoundness, as determined by law in its relation to crime, at the disposition not of judges, but of jurymen? At all events the case demands an effort; "anceps remedium, melius est quam nullum." As the matter stands at present, the great, the good, the high placed, also, who in this country are likely to belong to the first two classes, are placed, under causes often connected with their very merits, in direct exposure to the knife of privileged assassins.

Before I quit this subject, I may make some remarks upon a part of it which immediately concerns the interests of our profession, but which has, in truth, great *public* interest. Subsequently to the trial of Macnaghten, many strictures have been passed on the judicial influence exercised by the professional opinions given on that trial. Medical practitioners are at present in an embarrassing position in regard to this subject. It constantly occurs to them to find their opinions solicited and implicitly accepted, not only in their *proper* province, the *pathology* of the case, but also as to the application of the penalties of the law to the acts which spring out of it. Thus, the Chief Justice stopped the trial of Macnaghten, because all the medical men concurred in opinion, not only that he was mad, which was the point to the extent of which they ought to have been consulted, but also that he was an "irresponsible agent," by which they meant a person not liable to punishment, a consideration no doubt having many relations to the question of madness, but still distinct. Now, defective as our law at present is, had the Chief Justice tested the opinions of those medical witnesses by the legal criterion offered in the opening speech of the Attorney General, he would have placed the medical witnesses in their right position, and possibly have himself arrived at a different conclusion. But he was contented to allow them to supply him with law as well as medicine. If the dicta of the earlier English lawyers on this subject are (justly) considered inapplicable, let them be displaced. But it is desirable, for the interests both of the medical profession and the public, that the line of demarcation between the data which medical witnesses may supply, and the conclusions which lawyers draw from them in reference to their own principles of practice, should be maintained. The province of medical advisers in the above point of view may be clearly defined. It is their duty to point out any mental unsoundness existent in

the presumed delinquent, and to afford such information as may enable those before whom he is tried to appreciate its influence in rendering punishment ineffectual, and therefore inapplicable, or to avoid this supposition, where, according to the principles of the law, it must be deemed erroneous. Thus, in the case of Macnaghten, they would have suggested grounds for determining, whether at the moment of his murderous act he was aware of its criminality, or on any other grounds was rendered by his state of insanity incapable of committing a crime. Thus dealt with, medical evidence would become a safeguard to the public, and not exclusively to the offender.

In making these remarks, I strongly disclaim any tendency to depreciate the evidence given on former occasions by medical witnesses in this class of cases. In their reference to our profession the insane are objects of tenderness, and of curative treatment. It cannot be a matter of surprise, that we should be averse to consign to punishment those whom we are habituated to regard in this kindly relation, and that if we are virtually retained as advocates for them, we should do our best to screen our unfortunate clients.

Appendix.

3. This is not always the case. In the *Examiner* for the 10th of June, 1838, the following paragraph occurs:

"It was but lately we saw announced the discharge from the Cork Lunatic Asylum of a captain of an East Indiaman, who had murdered his crew of eight seamen in cool blood. He had put them in irons one after another for alleged disobedience; and the men had submitted, relying on the justice of their cause, and on obtaining redress when they should get home. But, when in irons, he beat out their brains."

In this awful case, what Jeremy Bentham terms particular prevention, as applying to the delinquent, and contrasted with the preventive effect of example, was required, since he was afterwards let loose on society. I should be very glad to know what security of this first kind was obtained against his perpetrating a second series of murders?

4. Surely this point is not sufficiently considered in the course of education. A young person who already possesses at the hand of nature a brilliancy and depth of imagination scarcely compatible with a just preponderance of steady reason, is chosen, because he already possesses this faculty in a high degree, as one in whom it ought to be encouraged and expanded. Accordingly, that place of education is chosen for him which is most likely to foster his aspirations. His own ambition and the sympathies of his friends are alike enlisted in his taking a line favourable to the development of what they call his genius. He is commanded to luxuriate in classical literature; he is carefully led through all the flowery paths in which he is by nature too well inclined to stray; he learns, like the unhappy Collins, "to love fairies, genii, giants, and monsters; he delights to rove through the meanders of enchantment, to gaze on the magnificence of golden palaces, to repose by the waterfalls of elysian gardens." All this may be favourable to success in the pursuit of an imaginative profession, but it is very unfavourable to mental health in his case. In these respects the Lectures of Sir Joshua Reynolds breathe in every page wholesome instruction, not confined, indeed, to his own art, but coextensive with the entire range of the faculty of the imagination.

5. The term "moral insanity," frequently used in discussions of this kind, is calculated to give considerable vagueness to our reasonings on this subject, from its relations to another form of unsoundness. Insanity is most conveniently viewed as a disease of the intellect; but, as such, it can scarcely fail to interfere with moral conduct and feelings. It will, indeed, be often observed, that long before the understanding has lost its control over the chain of our reasoning, it has ceased to restrain our conduct. In this way it is that so many unfortunate persons are ruined in their means long before they have been convicted of insanity. The disease is discovered too late. This state may very well be called "moral insanity," or rather "the moral phenomena of insanity." But far removed from this state, as involving, indeed, no lesion of the understanding, but being an original disease of the

emotive—the moral part of our nature, is the disease alluded to in the text as existing in Lord Ferrars. The moral symptoms which spring out of insanity, properly so called, may participate in any claims to impunity which the disease possesses. But "brutality" (the name which I have ventured to use for the contrasted disease), is strikingly distinguished from insanity in the circumstance, that whereas the sympathies of our nature, and the reason of the case, conspire to give some such immunity to the latter, they equally conspire to withhold it from the former; nay, they suggest that brutality, an original deficiency of the moral sense, can *only* be reached through penal infliction.

I have here given a brief sketch of a subject fully entered into in the work to which this essay constitutes a supplementary chapter; and previously in an essay on the Relation of the Theory of Morals to Insanity, which I published in 1834.

6. On the 2d of September, Thomas Rowe, a wine-cooper, aged 76, was discharged from the service of Mr. Thomas Waller, a wine-merchant in Cross Lane, on the ground that his faculties had given way, and that he did not know what he was about. On the 2d of October Mr. Waller received from him a letter, requesting Mr. Waller to give some other employment to the applicant, or to help him to one. On the 6th of October, Rowe calls upon Mr. Waller. Being admitted, he states that he has ineffectually sought for employment, and again urges Mr. Waller to take him into his service, either in town or in the country. Mr. Waller declines doing this, and expresses his opinion that Rowe must actually have saved enough to live upon. On another request for employment, reiterated by Rowe, and negatived by Mr. Waller, Rowe draws from his pocket a pistol, fires at him and wounds him, at a distance of two or three feet. He then draws another pistol, and observes to a person who prevents his using it, that such a person as Mr. Waller is not fit to live; an idea which he afterwards again expressed with equal force. Evidence was given on Rowe's trial, that latterly his faculties had much given way; that he frequently during the last six months had appeared not to know what he was about, and complained of a giddiness of the head. The usual averments, that the defendant was unable to distinguish right from wrong, were made by the medical witness. It was argued, that the announcement which the prisoner had received from his master, that he could not employ him further, had upset his mind; that when the prisoner fired he was *incapable of reasoning*, from the great excitement under which he laboured, &c. Mr. Ballantine, for the prosecution, contended that "it must not go forth to the world that trivial acts of eccentricity or absurdity were to be held as an answer to crime; neither must it be understood that persons upon such grounds were to receive immunity when they had committed a grievous crime."

Mr. Justice Maule having summed up, the jury almost immediately acquitted the prisoner, on the ground of insanity. This elderly person is therefore very comfortably provided for, the rest of his life, and a very convenient suggestion is afforded generally to servants out of place. All this is strangely wrong, even in relation to the existing state of our law. No evidence appears to have been adduced in proof of such mental unsoundness as is required to prevent the infliction of the legal punishment for an attempt to murder. Again, supposing this punishment is offensive to our sympathies, ought it to be exchanged for absolute impunity? Surely not.

The above trial and its results seem one of the first fruits of that of Macnaghten, with this difference, however, between the cases, that the crime of Macnaghten entails upon a man of property some privation of his means of enjoyment, while Rowe's transgression provides a pauper assassin with a comfortable livelihood. This case, indeed, and that of William Haynes, tried for the murder of his wife, by experiments made on her for the purpose of procuring abortion, and escaping absolutely unpunished, are grievous proofs of the inefficacy of our criminal law, or of the principles on which it is applied.

PNEUMONIA COMPLICATED WITH PLEURITIS.

To the Editor of the Medical Gazette.

Sir,

If the enclosed case is deemed worthy of insertion in your journal, its insertion will oblige

Your obedient servant,

John Christie.

Keith, Banffshire, Nov. 30, 1843.

James Leslie, Cairnfield, Enzie, aged 69, a small farmer, for two or three past winters liable to a dry, hacking cough, and slight difficulty in breathing.

After exposure to fatigue, cold, and wet, he was suddenly seized with severe pain in his right side, and, to a much greater extent than usual, with dyspnœa and cough.

A medical gentleman in his neighbourhood saw him at the commencement of his illness, but only prescribed some doses of medicine which acted severely on his bowels, which were at first costive.

On the 18th November, 1843, I was requested to visit him, and on doing so found him propped up in an arm chair, in which position, he said, he could only breathe with any degree of ease. At this time he had been about eight days ill, and the pain in the side was very much less than at the outset; but he was harassed by a cough which, to use his own words, he could not "get under," and the dyspnœa prevented him from resorting to the recumbent position at any time. He was so weak that he could hardly support the exertion of speaking, or rather whispering, in answer to my questions.

The tongue was loaded and white; urine scanty and high coloured; bowels for some days very loose, and stools slimy; pulse 60, small, and very compressible; sputa tenacious and reddish; respiration quick and shallow; skin cool and clammy; feet slightly œdematous; countenance of an anxious and despairing cast; and the lips and cheeks almost livid from congestion.

The motions of expansion and elevation of the ribs did not take place in any appreciable degree on the right side; and no vocal or tussine vibration could be distinguished in it.

The stroke sound of percussion was completely dull over all the side; and the sense of resistance so much increased that it could only be compared to it as elicited by tapping the thigh. Pressure applied to the intercostal spaces, which were almost obliterated on both sides, occasioned severe pain.

No modification of bronchial respiration, or of the resonance of the voice, could be made out; in fact, no sound of any kind, normal or abnormal, was present on the right side.

On the left side percussion gave, throughout all its extent, a loud, prolonged, and high-pitched stroke sound.

The chest was on both sides flattened laterally, but rounded, and bulging anteriorly and posteriorly; and the motions of the ribs on the left side were very limited.

The respiratory murmur was weak, and its inspiratory sound imperfect and jerking, while the expiratory was prolonged; and the breathing seemed to be carried on more by the supplementary muscles than by those which, in a state of health, peculiarly promote the respiratory acts.

Diagnosis.—*Pleuro-pneumonia, with complete hepatization of the right lung, and tense emphysema of the left.*

He gradually sank, and died on the evening of the 21st, three days subsequently to the period at which I first saw him, but no inspection of his body could be obtained.

Remarks.—This case is interesting and instructive in regard to the diagnosis of pleuro-pneumonia in the aged, and illustrates the value of a knowledge of the progressive changes which the structure of the body undergoes at an advanced period of life. At that time, the resonance of the chest, even in health, is greater than at an earlier period; and it is especially the case where the muscular system is atrophied, fat absent, the cartilages of the ribs ossified, and the chest, although flattened in one direction, projects in another, and forms an immobile, tense, elastic arch; while the air vesicles of the lungs are dilated, and retain within them a large proportion of the air inspired for a longer period than in healthy respiration.

A variety of causes contribute to produce immobility, deformity, and increased resonance of the chest in the aged; but when to these, as in the case

before us, pleuritis and hepatization of one lung, and tense emphysema of the other, are superadded, the signs *usually* considered diagnostic of pleuro-pneumonia are lost, and simply because no respiratory movement can take place.

To this it might be objected that even although the chest was immoveably fixed on one side, bronchophony and tussine vibration might be conducted from the opposite side by the air contained in the trachea and bronchial tubes of the inflamed lung.

The absence of these signs, however, may be explained by the prostration of the vital powers of the vocal organs in common with those of the rest of the body, which, together with the state of the chest and its contained viscera, would render them inadequate to the formation of articulate sounds, possessing force enough to excite vibratory movements which could propagate themselves to any distance; and in the same way, the weak shallow respiration, dilated air-cells, and the almost immobile chest, would present insurmountable obstacles to the forcible and rapid expulsion of such a volume of air from the left lung as would throw the opposite side of the chest into tussive vibration, even supposing the air stagnant in the bronchial tubes of the hepatized lung afforded a ready medium of conduction towards the solidified tissues.

Besides, when hepatization exists to such an extent as in this case, the air-cells and the smaller bronchi are blocked up by a soft inelastic lymph, which, in consequence of these properties, weakens rather than promotes the intensity of any vibratile movements which take place, and effectually prevents them from traversing so large a portion of solidified pulmonary structure as intervenes between the large bronchial tubes and the surface of the lung.

Even when disorganization of a more solid nature than the lymph effused in the second stage of pneumonia prevents the access of air into the bronchial tubes, the vocal fremitus is often obscured, or altogether prevented. Mr. Tapson relates a case illustrative of the point, in which "the large bronchus leading to the right lung was very much pressed upon, and the texture of the lung itself condensed by carcinomatous depositions, and in this there was a complete absence of the vocal fremitus." (Med. Gaz. Vol. i. 1842-3, p. 425).

It may, perhaps, be assumed that this was a case of pleuritis in which effusion had taken place to such an amount as to compress the lung so as to prevent respiration; and in the absence of an inspection of the body it cannot be positively asserted that it was not. But so far as signs go, the proof lies in favour of the diagnosis already formed. Dilatation and detrusion of the thorax on the affected side usually take place when the effusion is so very extensive, and bronchial or blowing murmurs may commonly be detected under the clavicle or close to the spine; and when to the absence of these we add the character of the sputa and the state of the lung, (for it must be assumed, from the history of the case, and the appearance of the thorax, that previous to the illness a tense emphysema existed in both lungs,) it becomes all but certain that the case was one of pneumonia complicated with pleuritis. The emphysematous condition of the left lung was inferred from the high pitch of the stroke sound; the obliteration of the intercostal spaces; the projection and immobility of the chest; the prolonged expiration and imperfect inspiration; the laborious breathing; the lividity of the cheeks and lips; and lastly, the habitual dyspnœa and cough.

The researches of M. Hourmann et Dechambre have established the fact that in the aged a natural emphysema exists, which may so far be considered normal. (Brit. and For. Med. Rev. Vol. i. p. 235.) And there can be no doubt that where there is a tendency, as in the old, to dilatation of the air-cells, slight causes will serve to give an impulse and direction to that which, to a certain extent, may be considered the natural structure of a particular period of life, and thus convert it into a state of disease which shall continue to progress until the pulmonary structure be completely disorganized.

CASE OF
ABDOOL RAMON KHAN,

PRIVATE 1ST COMPANY GOLUNDAUZE BATTALION.

Mr. Lawrence presents his compliments to the Editor of the Medical Gazette, and forwards the narrative of a case, which he lately received from

India, with a request from the gentlemen who treated it, Mr. Bowstead, surgeon in the Bombay army, that it might appear in one of the medical periodicals. The editor will be good enough to print it in the GAZETTE, if he should think it proper for publication.

Whitehall Place, Dec. 2, 1843.

I was called May 6th, 1843, soon after gun-fire, to the general parade ground, to see a native artilleryman who had been accidentally blown from a gun, while in the act of ramming home a blank cartridge.

The parade ground being adjacent to my house, no time was lost on my part in seeing my patient; I found him rolling on the ground, his mutilated arms writhing in agony: he was warm and sensible: I had him immediately removed to the hospital, and on carefully taking off his clothing I found he had sustained the following injuries:—Both of his hands and wrists were so dreadfully shattered that nothing remained but shreds of muscles, tendons, and dislocated and fractured bones. The ulnæ and radii of both arms were fractured in several places, and the flesh lacerated; the large bone of the right arm (or humerus) was fractured in pieces, and the parts forced into the shoulder joint; the left humerus had a compound fracture about midway between the joints with lacerations of the soft parts. His face and eyes were fearfully burnt, and he had sustained a severe blow on his chest; this was protected by the breast-plate, which was deeply indented by the force of the ramrod. On arriving at the hospital, finding that the nervous and circulating systems had not been overcome by the severe shock, and he still continued warm and sensible, I immediately amputated the right arm from the shoulder joint, in the usual manner. I also amputated the left arm about five or six inches below the shoulder joint; the poor fellow underwent these operations with the greatest coolness, never losing his senses, and it was only when both operations were completed (which they were in a very short time, the right arm was removed from the cavity in about a minute and a half,) he complained of faintness: a little hot brandy and water soon revived him, and he never had any signs of a collapse. It is useless my entering into a very minute detail of the operation, further than stating, that I made my native assistant press a door-key covered with a piece of lint on the artery as it passes over the first rib. I then made a semicircular incision below the joint, turning up the deltoid muscle and liberating the bone from its cavity; I then passed my knife under the bone, and formed my under flap by dividing the soft parts, arteries, &c. I immediately applied a ligature to the arterial main branch, which was the only vessel I had to take up. The left arm was taken off in the usual manner, and I had only to tie one artery: it was unfortunate the ligature silk was much too thick, but the case did not allow me to wait to remedy this. I visited him several times during the morning, and found him going on very nicely.

12 P.M.—Skin was rather hot, and a little oozing of blood from the stumps, but not more than would be expected; feels more pain; he is rather thirsty.

2 P.M.—Is a little restless, and begins to feel more pain; is more thirsty; his skin moist, not very hot.

℞ Soda Carbonas, ʒss.; Tinct. Hyoscyami, Vini Antimon. Tart. aa. ʒss.; Aq. Puræ, ʒiss. M. fiat haustus, to be taken with a proportion of acid citric in effervescence, every two hours.

5 P.M.—Skin is not so warm; he is, as he has always been, quite sensible; breathing regular; the burn on his face pains him considerably; in other respects he says he is easier. The stumps appear all right: are getting a little hot. Apply cold water which evaporates freely during this month, from the hot winds.

Rept. Haustus saline, c. anodyne.

8 P.M.—His skin is naturally warm, and his pulse is not much excited; not so restless; he doses, and does not complain of much pain.

To take lemonade now and then. Rept. Haustus Salinæ occasionally; omitting the Tinct. Hyoscyami.

℞ Calomel, gr. v.; Pulv. Jacobi. gr. ij.; Acet. Morphia, gr. ½. M. ft. Pilula. h. s. s.

May 7th.—At midnight sleeping, and going on right.

3 A.M.—The same as at 12 A.M.

5 A.M.—Skin is naturally warm, and pulse pretty regular.

Continue the cold lotion.

Bowels have not been moved.

Habt. Magnes. Sulph. ʒvi.; Vini Antimon. Tart. ʒss.; Tinct. Hyoscyami, ʒss.; Aquæ. Menth. Pip. ʒij. statim.

5 P.M.—He appears to be going on very well; he is cheerful; bowels have been moved once; motions rather dark.

When the stumps get hot continue the cold water. Rept. Pilulæ c. Calomel et Pulv. Jacobi. &c. h. s. Continue Haustus Salinæ pro re nata.

9 P.M.—Quite tranquil.

11 P.M.—Still going on well.

8th.—The stumps are doing well; slept well, and does not complain of much pain, with the exception of his face and eyes; bowels have not been moved.

Rept. Haustus aperiens c. Magnesiæ Sulph. &c.

1 P.M.—Has a little heat of skin, and lately been drowsy; his heart, and the arteries of the body, pulsate much more than usual.

Continue Haustus Salinæ: add Tinct. Digitalis, ɱx. pro re nata; Habt. Calomel, gr. j.; Antimon. Tart. gr. $\frac{1}{8}$; Acet. Morphia, gr. ss. omni nocte.

9th.—He has had a very easy and quiet night; complains of but little pain, with the exception of his eyelids, on which are two ulcers: the extensive burn on his face doing very well. The stumps appear to be healing, particularly at the shoulder: they have been dressed. The pulsation has much abated.

5 P.M.—Going on very well; no unfavourable symptoms.

Rept. Pilulæ h. s. Continue Haustus Salinæ.

10th, 6 A.M.—Has had a very good night; stumps are healing, and look healthy: the ligatures not come away.

Habt. Decoct. Cinchona, ʒss.; Tinct. Cinchona Co. ʒj.; Acid. Nitr. dilut. ɱxv. bis in die.

Vespere.—Going on well. Cont. Pil.

11th.—On dressing the left arm, which was amputated below the shoulder-joint, a little coagulated venous blood come away from the ligature opening. After this, till May 25th, taking mild alteratives and tonics, with mild aperients, he gradually got quite well: the ligatures were a long time in coming away, owing, I think, to the thickness of the silk. As he suffered no pain from them I did not think it necessary to use much force. The burn on his face got quite well, but the sight of his left eye, I fear, is lost; not from inflammation; indeed, the eye appears perfect.

REMARKS.—The singularity in this case is, that a man receiving such extensive and severe injuries, the nervous and circulating systems should not have been affected for such a length of time that I was allowed to convert an extensive injury, the nature of which I have detailed, into two simple incised wounds; consequently no shock on the system came on, and he recovered without any unfavourable symptoms. The left arm did not heal as regularly as usual, but I think it was owing to the bruised state of the muscles, and the thickness of the ligature. I must beg to say the man is 21 years old, athletic, and possesses great mental and physical powers. I was unfortunate in not having other professional aid, as at that time I was the only surgeon within thirty miles. After the accident, the time occupied between it and the patient being put into his cot after the operations, was about forty minutes, five of which were taken up by getting a dooly (or vehicle) to remove him to the hospital; the deciding, preparing for the operations, and performing them, took up the rest.

J. BOWSTEAD,
Surgeon, 2d Grenadier Regt. N. I.

Sattara, Sept. 28, 1843.

ON THE
NERVES OF THE UTERUS.

BY R. D. GRAINGER, Esq.

(For the London Medical Gazette.)

I HAVE derived great pleasure from examining the dissections of the uterine, vaginal, and vesical nerves, made by Dr. Lee.

The trunk and branches of the sympathetic nerve being left, as well as the trunks of some of the sacral nerves, afford a satisfactory clue in the examination. The injection of the blood-vessels affords a further andvaluable aid in testing what are, and what are not, nervous fibrils.

After carefully inspecting and examining these beautiful dissections, I have no hesitation in expressing my conviction that they bear out fully and

entirely the delineations and descriptions published by Dr. Lee.

1. The preparations show an unequivocal continuity of fibres proceeding from undisputed nervous structures, the sympathetic and sacral nerves, to the newly discovered ganglia of the uterus, vagina, and ureter.

2. The nervous branches of the newly discovered ganglia join in various directions with acknowledged nerves, such as those of the inferior mesenteric plexus furnishing the hæmorrhoidal nerves, and with the spermatic nerves descending on the uterus from the folds of the broad ligaments.

3. The occnrrence of small ganglia and gangliform enlargements, or the newly discovered nerves, are very characteristic, and corroborative of their real nature.

4. The nerves are accompanied by injected blood-vessels in a manner not seen in elastic tissue, though usual with the ganglionic nerves.

5. The ganglia discovered by Dr. Lee for the most part present in their form and disposition, and in the openings they possess, a perfect and entire correspondence with the larger ganglia of the sympathetic.

After the examination I have made, it certainly appears to me impossible for any one to arrive at a just conclusion respecting the true character of Dr. Lee's description without a careful inspection of his preparations.

It is proper to add, I have not yet had an opportunity of making a microscopical examination.

Nov. 13, 1843.

MEDICAL GAZETTE.

Friday, December 15, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

STATISTICS OF THE ROYAL COLLEGE OF PHYSICIANS.

THE Royal College of Physicians of London have just put forth their annual catalogue of Fellows and Licentiates. When we reflect that London contains a population which, two years and a half ago, was ascertained to amount to 1,875,493 persons, and may now be fairly estimated at one million nine hundred thousand souls, it is not an idle inquiry, how is this prodigious multitude of human beings supplied with medical attendants? We will take some other opportunity of investigating the number of surgeons and general practitioners. Our present business is with the number of licensed physicians.

The actual number of Fellows on the new College list is 159; candidates for the Fellowship 4; Licentiates 269; Extra Licentiates 182. Total 614. The number of Licentiates promoted to the Fellowship during the last year, were 9; viz. Sir Robert Chermside (elected some years back), Dr. Thomas Thomson (of Tunbridge Wells), Dr. Sayer, Dr. Webster, Dr. Dowler, Dr. Stolterforth, Dr. Rigby, Dr. Blakiston (of Birmingham), and Dr. Arthur Farre. Seven deaths took place among the Fellows, viz. Dr. Mytton, Dr. John Latham, Dr. Franck, Dr. Bancroft, Sir Charles Morgan, Dr. Cope, and Dr. Williams (of Ipswich). The order of Fellows therefore has gained an accession of two members only. Of the 159 Fellows now on the College list, 72 have either retired from practice, or are resident in the country. The number of practising Fellows, therefore, resident in the metropolis, is 87.

Nine Licentiates have been added to the list during the past year. Nine (as we have just seen) have been promoted, and seven have died; viz. Dr. Wightman, Dr. M'Dougle, Dr. Thomas Burder, Dr. Ridgway, Dr. Charles Phillips, and the two Drs. Lilburn, who died, we believe, within three months of each other, the one in Candia, whither he had gone as Consul, and the other in London. The Licentiate list therefore is diminished by 7.

It was last year 276. It is now, as we have stated, 269. Of these 269 Licentiates, borne on the College list, no less than 146 have either retired from practice, or are resident beyond the metropolitan district. This reduces the number of practising Licentiates to 123, which, added to the 87 practising Fellows, gives a grand total of 210 physicians nominally available for the public service in the metropolis. But we may fairly presume that twenty of that number are from various circumstances (ill health, frequent absence from town, &c.) hardly to be looked upon as candidates for employment. This brings the number of physicians actually practising in London and its immediate environs, to 190, which is one for every ten thousand of the population. No one, we think, can say, after this, that London is overstocked with physicians. There is scarcely a town in England numbering a population of ten thousand, which does not contain two; and many contain three, or even four, physicians. We are inclined to believe, however, that such an amount of population does not adequately support more than one physician. The maximum appears to have been reached in London. By referring to the table with which this notice concludes, it will be seen that the actual number of metropolitan physicians is less this year than last by five.

We come now to the class of Extra Licentiates. No less than 41 new members have been added to this class, and as only one death in their number is recorded (Dr. Stock, of Bristol), this division of the College list is augmented by 40. The numbers last year were 142. This year they are 182. The Extra Licentiates, it will be remembered, are country practitioners, examined and licensed by a board differently constituted from that which examines and licenses those destined for practice in the metropolis, and *seven miles round it.* This phrase, by the way, now that the metropolis extends from west to east (from Hammersmith Bridge to Woolwich) very nearly ten miles, is become a somewhat obsolete mode of expression, indicating, in a manner not to be mistaken, the necessity of that reform in College affairs which we presume cannot be much longer delayed.

We do not clearly understand the cause of this sudden fondness which has risen in favour of the Extra Urban license of the College of Physicians. It seems to denote a wish to nestle under the College wings, but we suspect there is something at the bottom of this new-born zeal more than we have been able to fathom. It is hardly worth while to inquire, for the class of Extra Licentiates is doomed to a speedy decay. The forthcoming charter of the College signs the death-warrant, not of our good friends the 182 provincial physicians, but of the order to which they belong.

It may be interesting to some of our readers to compare the present numbers, as borne on the College books, with those which the same books presented in an earlier age. For instance, in 1820, the College of Physicians numbered 99 Fellows (including sundry Candidates for the Fellowship,) 200 Licentiates, and 39 Extra Licentiates. Total 338. Thirty-four years ago, viz. in 1809, when Dr. Hue was the youngest Fellow, the College bore upon their books the following numbers: 59 Fellows; 4 Candidates for the Fellowship; 152 Licentiates; 5 Licentiates in Midwifery; and 35 Extra Urban Licentiates. Total 255.

If we carry on our retrospect still farther back, we shall find something to amuse if not to instruct us. The gradual falling off in the number of Doctors, in a proportion equalling, as we may well

believe, the lesser amount of the population, is well worthy of note.

In 1788, the College numbered 42 Fellows, 87 Licentiates, 8 Licentiates in Midwifery, and 29 Extra Licentiates. Total, 166.

In 1765, the Fellows had increased in number from 42 to 63, but the Licentiates had fallen off so greatly, that the total number of practising physicians was only 110.

In 1746, a new feature meets us. The number of Fellows in that year was 56; but in this list are comprised two dukes, viz. the Dukes of Richmond and Montagu. In those palmy days—never, we fear, to return—the nobility were as much flattered by possessing the degree of Doctor in Medicine, as their successors are now, at an installation, by having conferred on them the corresponding honour in civil law. Besides the 56 Fellows, there were then 2 Candidates, and 24 Licentiates, forming a total of only 80. It is worthy of note that while in the year of which we are treating (1746) there were 54 practising Fellows, in 1788, forty-two years afterwards, there were but 42 Fellows. The College had, for some reason or other unknown to us, become chary in the distribution of the fellowship, or else the profits of doctors had materially declined.

We will now go back to the 17th century. In 1695, during the reign of King William III. the profession of physic flourished far more than it did fifty years afterwards, in the reign of George II.; at least, if we may judge from the numbers who came forward to share in its honours and emoluments. In that year, when Richard Morton was at the head of his profession in London, the College list contained no less than 130 names; viz. 70 Fellows, 11 Honorary Fellows, 8 Candidates, and 41 Licentiates. In 1677 (reign of Charles II.), when Sydenham had reached the zenith of his fame, the number of licensed metropolitan physicians had sunk to 80; namely, 53 Fellows, 12 Candidates, and 15 Honorary Fellows. No Licentiates appear in this year's catalogue.

In 1650, the total number on the College-list was 47, of course all Fellows. In 1618, during the reign of James I., the total number of physicians practising in London with the College diploma was 34. In this year, the College of Physicians published the first edition of their Pharmacopœia. And here we shall pause in our retrospect of the statistics of the Royal College of Physicians. We have seen their number steadily retrograding from 1843 to 1618; or, to reverse the order of procedure, we have seen them progressively advancing, in the course of two centuries and a quarter, from 34 to 614. It has been calculated that in 1618 the population of London was under 350,000. The 34 physicians of that period, therefore, afforded one physician to every ten thousand inhabitants; and this we have already shewn to be the exact proportion subsisting at the present time between the givers and takers of physic in this metropolis. A curious coincidence certainly, but calculated, also, to teach us, that in all ages of the world there has been the same proportion of urgent and acute cases, the same proportion of patients in the richer and poorer classes of society, and the same necessity felt for grades of professional rank.

We shall conclude these brief notices of collegiate statistics by informing our readers that the oldest living physician on the College-list is Dr. Edward Roberts, who became a Fellow in 1792; and that the oldest practising physician in the metropolis is Sir Henry Halford, the President, who entered the portals of the College exactly fifty years ago, (1793). Diu nobis intersit.

Statistics of the Royal College of Physicians of London from 1618 *to* 1843 (225 *years*).

Years.	Fellows.	Honorary Fellows.	Candidates.	Licentiates.	Licentiates in Midwifery.	Total Metropolitan Physicians.	Extra Licentiates.	Grand Total.
1618	34	—	—	—	—	34	—	34
1650	47	—	—	—	—	47	—	47
1677	53	15	12	—	—	80	—	80
1695	70	11	8	41	—	130	—	130
1746	54	2	2	24	—	80	—	80
1765	63	3	8	36	—	110	—	110
1788	42	—	—	87	8	137	29	166
1809	59	—	4	152	5	220	35	255
1820	89	—	10	200	—	299	39	338
1842	157	—	4	276	—	437	142	579
1843	159	—	4	269	—	432	182	614

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

November 28, 1843.

Mr. Stanley, President, in the Chair.

On the Cause of the occasional presence of Spermatoza in the fluid drawn from the sac of common hydrocele of the tunica vaginalis. By John Dalrymple, Esq. Surgeon to the London Ophthalmic Hospital.

The author commenced by referring briefly to the cases published in the last volume of the Society's Transactions, where spermatoza were found in the fluid drawn both from encysted and from common hydrocele. According to his own observations, these bodies are generally much less numerous in the latter than in the former kind of the disease, and the explanation which he offered of the mode in which they become mingled with the fluid of common hydrocele, when evacuated by the trocar, was the following. He quoted the authority of Scarpa to shew that when the tunica vaginalis becomes distended with fluid, the different vessels of the spermatic cord are separated from each other to a greater or less distance, owing to the gradual expansion of the membranes, and the epidydimis and vas deferens are consequently removed out of their natural places in reference to the body of the testicle. He likewise presented to the Society a preparation, with a drawing, of a hydrocele, in which that condition of the tubes of the testis was exhibited. The testicle was situated at the posterior and inferior part of the sac, and somewhat internally: the vascular cord was seen running along the posterior wall, the vas deferens being about one inch distant from it, and to the outside; at the lower part of the sac, the vas deferens approached the testis, made a few large coils, from which commenced the lower head of the epidydimis; as this body ascended again, it was seen to be separated to the distance of an inch and a half from the testis, and to lie on the lateral aspect of the sac. Above the testis, the position of parts was as follows:—The vascular cord at the most posterior part of the sac; the vas deferens next to it, but distant about half an inch; and, lastly, the epidydimis, still more external, and anterior to the vas deferens. At the upper part, the epidydimis suddenly crossed the vas deferens, and descended in a curved line towards the body of the testicle, in which it finally merged.

The author concluded by expressing his opinion, that in cases of common hydrocele, the epidydimis and vas deferens are placed by no means out of danger of being punctured by the trocar, in the operation of tapping; and added, that the wounding of even a single tube might well afford the few spermatozoa found in the specimen of fluid referred to above, the more especially when we remember the squeezing often made to evacuate the last few drachms of the contained fluid.

Cases of Carcinoma of the Thyroid Gland. By Cæsar Hawkins, Esq., Surgeon to St. George's Hospital.

The author began by adverting to the common opinion that malignant tumor rarely commences in the thyroid gland, and stated his belief that this body is more frequently the seat of primary scirrhus than is usually supposed. In confirmation of this view, he related, in the first place, a case which was under his care in 1837, where the tumor appeared to be of that nature, but in which he had not the opportunity of making a *post-mortem* examination to verify his diagnosis; aod he then alluded to four other cases which had come under his observation. He re-

marked that the age of the patient, when the disease commenced, was from 45 to 65; at which period of life ordinary bronchocele very seldom takes place, and the tumors most likely to present themselves are the serous tumors, developed in or near the thyroid gland, or the cartilaginous or osseous degenerations, lately described by the term *enchondroma*. Having pointed out the diagnostic marks by which these tumors may be distinguished, and dwelt on the chief characters of carcinoma affecting the gland, he proceeded to relate the particulars of a case recently under his care in St. George's Hospital; his description being illustrated by coloured drawings, made during the life of the patient, and from the morbid parts found in dissection, and by preparations.

Without following the author through the details of the case, it may be mentioned that the tumor which extended on both sides from the thyroid gland, was found to have attained a large size, and the parts adjacent to the larynx and œsophagus were involved in its texture, which presented the usual appearance of true scirrhus. A large ulcer opened on the surface of the œsophagus where the tumor adhered to that tube; and another ulcerated opening led into the trachea, immediately below the cricoid cartilage. The right internal jugular vein was closely adherent to the tumor, its coats having been absorbed at one part, and a small portion of the morbid structure having projected into its interior. The pneumogastric nerve was much flattened, and its fibrils were separated, so as to present a plexiform appearance; the carotid artery was deeply imbedded in the tumor. In describing the thyroid gland, the author observed that this body had nearly disappeared, the only part remaining being a small portion of the left lobe, intimately joined to the tumor, so as to shew that they were originally parts of the same body; and there was a complete line of demarcation between the two structures.

Cysticercus Cellulosa of the Brain. By Drewry Ottley, Esq.; communicated by John Forbes, M.D., F.R.S.

The author remarks, that the presence of cysticerci in the brain is sufficiently rare to warrant, he thinks, the communication of a single case, which moreover possesses an interest as being the only one, as far as he can discover, in which an opportunity was afforded of watching the progress of the disease from an early period, and also from there not being any complication likely to disturb the cerebral functions; so that the symptoms observed were evidently due to the presence of the parasitic animals.

The patient was a woman, forty years of age,—for many years a sufferer from emphysema of the lungs and bronchitis. In the early part of 1838 she began to complain of frequent giddiness, and a dull stupifying pain in the head. In July of that year she suffered from temporary numbness and loss of power in the right hand and arm, with some confusion of intellect and difficulty of articulation. Cupping relieved her; but the symptoms returned again, and after a time the giddiness became more constant, and the loss of memory and confusion of intellect more considerable. In 1830, she became subject to fits, during which there was entire loss of consciousness, and convulsions. They differed from epileptic fits in being less sudden, both in their invasion and termination. The recovery from them was also slower, for she often remained for two or three days in a stupified state. During the last twelve months of her life the pain in the head was constant, though never extremely acute, her sight became dim, and the convulsions recurred more frequently. At the end of October, 1840, after frightful convulsions for twenty-four hours, she expired.

The state of the brain after death is thus described:—The vessels on the surface of the brain were somewhat congested, and the sub-arachnoid cellular tissue infiltrated with serum. Numerous small fibrous cysts were found in the pia mater covering the surface of the hemispheres, and dipping between the convolutions of the brain. The cysts were present on both sides, but were most numerous on the surface of the left hemisphere. They varied in size from that of a pea to less than a peppercorn; they were seated in the pia mater, but had become partially imbedded in the grey matter of the convolutions. None existed in the white matter, in the central ganglia, nor in the plexus choroides. A few were found at the under surface of the cerebral convolutions, but none either in the cerebellum or medulla oblongata. The cerebral tissue around these cysts appeared natural as to colour and consistence, and the brain generally, except for the presence of these animals, would have been termed healthy. There was rather more fluid than natural in the ventricles, and at the base of the brain.

Several of the cysts were afterwards examined, and each was found to contain a vesicular worm, consisting of a posterior transparent vesicle, in which the anterior cylindrical portion or body, furnished at its extremity with four suckers and a double circlet of hooks, lay retracted, like the finger of a glove turned in, and could be expelled by gentle pressure on the containing vesicle; in short, answering exactly to the description given of the *cysticercus cellulosa* of Rudolphi.

Abstract of a Paper on the State in which Uric Acid exists in the Urine. By H. Bence Jones, M.A. and M.D. Communicated by Cæsar Hawkins, Esq.

Berzelius mentions Dr. Prout's view of the uric acid existing as urate of ammonia, and then states his own, that uric acid most frequently is in an uncombined state, though modified by the presence of other matters. Dr. Prout adheres, in his last edition, to his own opinion. Dr. Simon thinks that urine may contain free uric acid, and also urate of ammonia, &c. Becquerel considers uric acid exists, combined with colouring matter and extractive matters. I first examined the appearance and properties of the reddish deposit obtained from urine by evaporation, under the air-pump. When examined with the microscope, this is always in the form of minute globular particles, too small to be measured. Some of the deposit was washed with alcohol, dried and dissolved in boiling water; after standing ten hours, no deposit took place, so that the point of saturation might not have been reached. A weighed quantity of fluid, at temperature of 64 deg. Fah., evaporated to dryness, showed that one part of residue was dissolved in, at the most, 1349 parts of water. Some urine, which, on standing twelve hours, gave a deposit, was filtered; a weighed quantity of the urine, at 64 deg. Fah.,showed that one part of uric acid remained in at most 2567 parts of urine.

Healthy urine, specific gravity 1027, evaporated *in vacuo*, until it gave a deposit, was filtered; a weighed quantity of the clear fluid showed that one part of uric acid remained in at most 2789 parts of urine.

M. Becquerel states the usual quantity of uric acid is, one part of uric acid to between 2000 and 3333 water.

M. Lecanu states the quantity of uric acid is one part of uric acid to 780—1030 water.

I then examined the appearance and properties of pure urate of ammonia, obtained by boiling strong ammonia with uric acid. Under the microscope this substance is seen to consist of small needles, which form tufts and crosses.

In slightly ammoniacal solution, one part of urate of ammonia required 1118 of ammoniacal water to hold it dissolved. When perfectly dried over sulphuric acid *in vacuo*, the needles were re-dissolved, and the solution reddened blue litmus paper.

In water, which was perfectly pure, some needles were dissolved.

After standing twelve hours, to give a deposit of excess of urate of ammonia, the solution was filtered; a quantity weighed at the temperature of 69 deg. Fah., showed that one part of nitrate of ammonia remained in 897 parts of water.

A second experiment gave, at the temperature of 67 deg. Fah., one part of urate of ammonia to 1012 water. A third experiment, with needles prepared at another time, gave one part of urate of ammonia to 996 water, at 69 deg. Fah. A fourth evperiment, in which evaporation took place under the air-pump *in vacuo*, one part of urate of ammonia required 1018 parts of water, at 59 deg. Fah.

By exposure for a considerable time to heat, even below 212 deg., the needles of urate of ammonia are decomposed; crystals of uric acid may be detected with the microscope. If to a solution of these needles, which is just so strong that it gives no precipitate on standing twenty-four hours, the smallest quantity of very dilute liquor ammonia, or small quantities of muriate sulphate, or acetate of ammonia, are added, a deposit falls in a few minutes. The precipitate is, with the two last, changed in form; no needles are seen, only globules. On the addition of any acid, the needles undergo a change.

By three analyses of the needles I obtained in 100 parts of substance—

	1st.	2d.	3d.	Theory.
Uric acid	87.65	87.09	86.40	86.58
	(One equivalent of uric acid.)			
Ammonia . .	9.32	9.29	9.12	8.77
	(One equivalent of ammonia.)			
Loss . . .	3.03	3.62	4.48	4.63
	(One equivalent of water.)			

I tried in every way to obtain another urate of ammonia, but did not succeed. I then tried if the needle could be modified, so as to have the appearance of the ordinary urinary sediment.

When the needles were boiled with healthily acid urine, they were dissolved, and after a time a deposit took place, precisely similar to the ordinary deposit When cold, the clear urine was again poured off, and boiled with fresh needles; the ordinary deposit again took place, as it did also a third time.

To a hot solution of needles in water, so little urine was added, that the deposit on cooling was quite uncoloured; with the microscope it consisted of globules.

Some of the needles were dissolved in hot water, and some pure urea was added; still the deposit on cooling consisted of needles.

Excess of uric acid was used, and still needles were deposited.

I next tried common salt; with this the deposit was precisely similar to the deposit in urine. In making this experiment I observed that the deposit was far less than with pure water, and I found that one part of urate of ammonia with rather more than one part of salt, requires only 466 parts of water at 71 deg. F. One part of urate of ammonia with nearly two parts of salt, required 468 parts of water, at 67 deg. F., and one part of urate of ammonia with two-thirds of one part of salt, requires 703 parts of water, at 68 deg. F.

These, and the previous results, may be compared in the following table; the experiments having all been made on hot saturated solutions, which stood until they deposited crystals.

In ammoniacal mother liq. . .	at 65 deg. F.	1 urate of amm.	to 1118	water.
In pure distilled water	at 67 deg. F.	ditto	ditto . 1012	ditto.
Ditto ditto	at 59 deg. F.	ditto	ditto . 1018	ditto.
Ditto ditto	at 69 deg. F.	ditto	ditto . 897	ditto.
Ditto ditto	at 69 deg. F.	ditto	ditto . 996	ditto.
Little salt and distilled water . .	at 68 deg. F.	ditto	ditto . 703	ditto.
More salt	at 71 deg. F.	ditto	ditto . 465	ditto.
Most salt	at 67 deg. F.	ditto	ditto . 468	ditto.

If a great excess of salt was used, the urate of ammonia became as insoluble as in pure water.

From these experiments it appears that urate of ammonia, when dissolved with about an equal quantity of salt, acquires a peculiar degree of solubility in water, and a different appearance from pure urate of ammonia.

The appearance is identical with that deposit obtained from urine, and the solubility beyond the largest quantity which Lecanu observed in the urine.

I next tried what effect the salt would have on pure uric acid. I found one part of uric acid remained dissolved in 8,941 parts of water, at 68 deg. F., and one part of uric acid with salt remained in 7,199 parts of water at 64 deg. F. These results tend to establish Dr. Prout's opinion, shewing how urate of ammonia is modified in form and in solubility.

The experiments may give a further insight into the various causes of that frequent deposit of urate of ammonia which occurs in healthy urine.

Salt may increase or diminish the solubility of the urate of ammonia, according as it is in moderate quantity, or in great excess. The sulphate, the muriate, and the acetate of ammonia, lessen the dissolving power of water. Each salt that occurs in the urine has most probably some effect on the solubility of the urate of ammonia, and it may be, by a very extended inquiry into the relative re-actions of the different salts, that we may arrive at an accurate knowledge of the causes of the occasional deposits in healthy urine.

UNIVERSITY OF LONDON.

EXAMINATION FOR THE DEGREE OF DOCTOR OF MEDICINE. — PASS EXAMINATION.

Monday, Nov. 27th. Morning, 10 to 1.

Logic and Moral Philosophy.

Examiners, Mr. Burcham and the Rev. H. Alford.

1. Give an account of the sensualist and idealist philosophies.

2. Criticise generally the Essay concerning Human Understanding; its method, objects, arrangement, and style.

3. In what sense does Locke use the word "Understanding?" What other senses have been given to it?

4. What are Cousin's remarks on Locke's procedure in examining the origin of our ideas? State your own opinion on the proper order of our inquiries concerning Human Understanding.

5. Translate the following passage, and accompany it with a brief statement of Cousin's arguments, of which it is a summary.

Locke a éprouvé son système sur un certain nombre d'idées particulières, savoir: l'idée de l'espace, l'idée de l'infini, l'idée du temps, l'idée de l'identité personelle, l'idée de la substance, l'idée de la cause, l'idée du bien et du mal, s'imposant la loi d'expliquer toutes idées par la sensation et par la réflexion. Nous avons suivi Locke sur tous ces points qu'il a lui-même choisis; et, sur tous ces points, un examen attentif nous a démontré qu'on ne peut expliquer aucune de ces idées par la sensation ou par la réflexion, qu'à la condition de méconnaître entièrement les caractères réels dont ces idées sont aujourd'hui marquées dans l'entendement de tous les hommes.

6. Give the substance of Cousin's remarks on nominalism and realism; and examine critically the assertion of Locke and his school, that the greater part of our disputes are disputes about *words*.

7. In what instances have the followers of

Locke perpetuated or advanced his errors? In what have they corrected them?

8. Give a brief account of the purpose and proposed contents of the "Novum Organum." What place are you disposed to assign to Bacon in the history of philosophy?

9. "As the sciences now in being are useless in the discovery of works, so is the present logic in the discovery of the sciences."—*Aphor.* 11.

Of what sciences and what logic is this said, and with what justice?

10. Enumerate the classes of prejudices or idols described by Bacon, and give instances of them.

11. How do you answer the argument against a future state which is founded on the presumption that death is the destruction of living beings?

12. Show that a kind of moral government is implied in God's natural government. In what sense may the notion of a moral scheme of government be said to be natural?

13. Distinguish between instinctive and deliberate resentment. What is the final cause of the former?

14. What idea, according to Hume, have we of cause and effect? What are the objections made by him to the *a posteriori* argument for the existence of a Deity?

Commentary on a Case in Medicine.

Examiners, Dr. Billing and Dr. Tweedie.

Case.—A married woman, 25 years of age, came under observation on the 8th of June, and gave the following account of her illness. About six months previously she felt pain in the cardiac region, and vertigo, followed by loss of power in the left side of the body and loss of speech. On the following day she became insensible, and remained so for about a week, but after the adoption of energetic treatment, recovered her consciousness and the power of the left side of the face, but the command over the left upper and lower extremity was much impaired. She was in this state when she applied for advice on the 8th of June, and continued without perceptible change for four weeks, when the pain in the cardiac region increased, accompanied with strong impulse of the heart, and a rough rolling murmur with the first sound. The measures pursued had the effect of diminishing the impulse of the heart so much that she unadvisedly exposed herself to cold. When visited a few days afterwards she exhibited the following symptoms:—the breathing was laborious, the lips livid; there was however so much consciousness that she recognised persons around her, but her articulation was indistinct and her voice feeble; the pulse became scarcely perceptible, the extremities cold, and she died in the evening.

What was the nature of her direase? What treatment would you have suggested? What appearances would you have expected to find on examination of the body after death?

A translation from Celsus, lib. iii. cap. ii.

Tuesday, November 28.—Morning, 10 to 1.

Medicine.

Examiners, Dr. Billing and Dr. Tweedie.

1. Describe the forms of hypertrophy of the heart. Give the symptoms, local and general, of each. What are the pathological effects of hypertrophy of the left ventricle?

2. Sketch the diagnostic symptoms and treatment of inflammation of the duodenum.

3. Detail the symptoms, varieties, and treatment of iritis.

4. Describe the diagnostic characters and forms of purpura, with the appropriate treatment of each.

Afternoon, 3 to 6.

1. When there is complete absence of the respiratory murmur over the whole of one side of the thorax, what inferences are to be drawn as to its pathological causes?

2. Detail the symptoms of scarlet fever, including a description of its several forms, and the treatment applicable to each.

3. Mention the sources from which the blood may issue in hemoptysis.

4. Enumerate the varieties of colic. Explain the causes, pathology, and appropriate treatment of each.

Tuesday, December 5.—Morning, 10 to 1.

Surgery.

Examiners, Mr. Bacot and Sir Stephen Hammick.

How do you know when a caries of the cervical, dorsal, or lumbar vertebræ is threatened? Give the symptoms and treatment of the different stages respectively by which the disease generally proceeds, when it goes on to its utmost limit, short of death, whether it has arisen from accident or a constitutional cavse: give the symptoms, appearances, and management of the various curvatures of the spine, up to a favourable or fatal issue: detail the symptoms, by which you detect the existence of a psoas and a lumbar abscess: point out the diseases with which they are occasionally confounded, from their earliest to their more advanced stages; giving the various modes of treatment which have been from time to time recommended; saying which you would prefer, with your reasons for such preference; and where the case terminates fatally, either

from caries, curvature, or abscess, you will write down the state in which you expect to find the bony and soft parts, by a post-mortem examination.

Afternoon, 3 to 6.

If called to a person about the middle age, and apparently hitherto in good health, who has been found lying in the street in a state of total insensibility, how would you detect, whether that unconsciousness has arisen, from a concussion of the brain; an extravasation of blood within the head, from violence or natural causes; a fracture of the skull; apoplexy; epilepsy; drunkenness; or poison? Detail the symptoms of each of the above states respectively, and where you think the application of the trephine is necessary, you will give the method of performing that operation; contrasting the practice of the present day, in the treatment of capillary, simple and compound fractures of the skull, with that pursued by Mr. Pott and the best surgeons of his time, with your opinion of the superiority of one over the other.

Wednesday, Dec. 6.—Morning, 10 to 1.

Medicine.

Examiners, Dr. Billing and Dr. Tweedie.

1. Sketch the characteristic symptoms of asthma, including a description of its forms and complications. Mention the opinions entertained of its pathology or nature; and give an outline of the treatment applicable to each variety of the disease.

2. Explain the principles on which the treatment of dropsy should be conducted.

Afternoon, 3 to 6.

1. Describe the various forms of palsy, connecting each with its pathological cause; sketch the indications to be kept in view in the treatment.

2. Give an outline of the treatment of continued fever, including, 1. The circumstances that require the employment of blood-letting, general or local. 2. Those which render it inexpedient. 3. The indications for the exhibition of wine and other stimulants, with the rules to be observed in their administration.

Thursday, Dec. 7.—Morning, 10 to 1.

Midwifery.

Examiner, Dr. Rigby.

1. Describe exactly the manner in which the head presents and passes through the pelvis and external parts during labour, in the most usual form of cranial presentation.

2. Describe the different modes of treatment which have been adopted in ovarian dropsy, and their degree of success.

Afternoon, 3 to 6.

1. Describe the different varieties of deformed pelvis, and the causes of them.

2. Enumerate the various ways by which the child can render labour difficult or dangerous by its own faulty conformation.

BACHELOR OF MEDICINE.

EXAMINATION FOR HONORS.

Physiology and Comparative Anatomy.

Ballard, E. *(Scholarship and Gold Medal)*	University Coll.
Browne, J. H. *(Gold Medal)*	Guy's Hospital.
Manson, F. R.	King's College.
Rubidge, R. N.	Guy's Hospital.
Fearnside H.	University Coll.
Davies, J. J.	London Hosp.

Surgery.

Topham, J. *(Scholarship and Gold Medal)*	University Coll.
Browne, J. H. *(Gold Medal)*	Guy's Hospital.
Stedman, S. S. *(Gold Medal)*	University Coll.
Davies, J. J.	London Hosp.
Heath, G. Y.	University Coll.
Rubidge, R. N.	Guy's Hospital.

Medicine.

Ballard, E. *(Scholarship and Gold Medal)*	University Coll.
Fearnside, H. *(Gold Medal)*	„ „
Browne, J. H.	Guy's Hospital.
Manson, F. R.	King's College.
Rubidge, R. N.	Guy's Hospital.

Midwifery.

Tapson, A. J.	University Coll.
Ballard, E.	„ „

CANDIDATES ON WHOM THE DEGREE OF M.D. HAS BEEN CONFERRED.

December 1843.

First Division.

*Garrod, A. B.	University Coll.
†Heaton, J. D.	„ „
Smith, E.	Queen's College, Birmingham.
Way, W.	University Coll.

* A Certificate of Special Proficiency in Medicine was awarded to Dr. Garrod.

† A Certificate of Special Proficiency in Medicine and a Gold Medal for a Commentary on a Case in Medicine were awarded to Dr. Heaton.

Medicine.

Garrod, A. B. *(Gold Medal)*	University Coll.
Heaton, J. D.	„ „

CASE OF PRESENTATION OF THE ANTERIOR FONTANELLE.

By John A. Elkinton, M.D.

August 4, 1843, at 10 o'clock P.M., I was called to visit Mrs. F——, in labour with her second child. The membranes ruptured (in my absence from the room) a little before 11 o'clock the same evening. Labour progressed gradually, with the head presenting, and, as I supposed, with the occiput to the

left acetabulum. After waiting some hours, labour advancing slowly, pains continuing all the time feebly, os uteri fully dilated, and pelvis ample, I determined to give ergot, having previously used some tansey or pennyroyal tea, which was convenient, without producing any effect. The powdered ergot was first administered, and then the wine of ergot, neither of which produced any apparent uterine contractions. As the head was moveable, and would occasionally be pressed down by voluntary efforts, in conjunction with pains, so as to appear almost on the point of delivery, I determined to apply the forceps and deliver. The patient becoming exhausted, I commenced the application of the forceps about 4 o'clock on the morning of the fifth. The male blade was readily introduced, but I very soon found it impossible to adjust the female blade.

Without further delay I sent for Professor Hodge, who was soon present.

He attributed the delay and difficulty to a malpresentation of the head, the child presenting the anterior fontanelle instead of the posterior fontanelle, to the centre of the pelvis. The position was such, that the occiput was somewhat to the left side of the promontory of the sacrum; and the termination of the sagittal suture at the root of the nose, somewhat to the right of the symphysis pubis. Hence two difficulties existed. First, the occipito-frontal, or longitudinal diameter of the cranium, corresponded to the sacro-pubic, or short diameter of the superior straight; and, secondly, the forehead was anterior, the occiput posterior.

For a favourable delivery, two indications were to be fulfilled. First, to cause flexion of the head, by which the vertex (or posterior fontanelle) should descend first, and the occipito-bregmatic (or perpendicular) diameter of the head be substituted for occipito-frontal diameter; and second, to cause rotation, so that the occiput might eventually come under the arch of the pubis, and not to the coccyx and perineum. This was accomplished by Dr. Hodge, with the fingers alone; he made pressure behind the symphysis, on the right side of the os frontis, pushing it upwards so as to cause flexion of the head, and at the same time to the right and backwards, so as to direct the face towards the hollow of the sacrum, and of course the occiput from the sacrum to the left acetabulum and symphysis pubis.

Having thus effected this important change in the position of the child, I was requested to take charge of the patient, and in a few minutes she was delivered of a large and healthy child, without further interference or artificial aid.

The object in this brief notice is to record the peculiarity of the presentation, and to confess the difficulty I have occasionally experienced in diagnosis. Who can positively determine the exact presentation of the child's head, in the early stage of labour? This case proves the importance of accurate distinctions in all varieties of presentation.

Philadelphia, Aug. 21, 1843.

CASE OF HEMIPLEGIA, CONSEQUENT ON TYING THE COMMON CAROTID.

By O. Fairfax, M.D.

Observing in a late number of the Medical Examiner, an instance of hemiplegia, consequent on tying the common carotid, and believing it to be an unusual effect of the operation, and an additional and striking exemplification of the fact, that opposite conditions of the brain, as regards its supply of blood, may result in the production of some symptoms in common, I am induced to send you the following similar case.

On the 18th of July, 1842, in presence of Drs. Murphy, Powell, and Richards, of this place, I applied a ligature to the left common carotid, an inch above the clavicle, and my patient became hemiplegic as regards the limbs of the right side, but the face was not affected. The hemiplegia may have occurred at the moment of tying the ligature, but was not remarked by the attendants until an hour or more after the operation. The patient, who was a middle-aged lady, already much reduced by chronic disease of the lungs, remained faint and hemiplegic to her death, which occurred after five days, apparently from exhaustion. Her mental faculties continued perfect to the last hour.

Alexandria (D. C.), August 31, 1843.

QUEEN ELIZABETH SUFFERING FROM THE TOOTHACHE.

There were found at Islington, concealed in the house of a catholic priest, three waxen images of the queen, and two of her chief councillors, which it was said were intended to be operated upon in a diabolical manner for her destruction. Much at the same time Her Majesty was attacked with such grievous toothache, that nothing could mitigate the torture she endured, and she obtained no rest either by night or day. Some persons attributed these sufferings to the malign magic that had been employed against her. Her physicians held a consultation on the royal malady; and instead of devising a remedy for her relief, fell to disputing among themselves on the cause of her indisposition, and the medicines most advisable to use.

The lords of the council then took the matter in hand, and decided on sending for an "outlandish physician, of the name of John Antony Fenatus," who was celebrated for curing this agonizing pain; but as it was a perilous thing to entrust the sacred person of a sovereign, so suspicious of plots against her life by poison as Elizabeth, to the discretion of a foreign practitioner, "who might possibly be a jew, or even a papist," they would not permit him to see Her Majesty, but required him to write his prescription.

Fenatus composed a long and elaborate Latin letter in reply, declaring in the first place his unworthiness to come after such great physicians, and then prescribing divers remedies, but with the intimation that, if the tooth were hollow, when all was said and done, it was best to have it drawn, though at the cost of some short pain. If, however, Her Majesty could not bring herself to submit to the use of chirurgical instruments (of which, it seems, he had heard something of her abhorrence), then he advised that the juice of *chelidonius major* might be put into the tooth, and so stopped with wax that none of it might touch the sound parts; which would so loosen the tooth, that in a short time it might be pulled out with the fingers; or the root of the said plant might be rubbed upon the tooth, which would produce the same effect; but concluded by declaring that drawing the tooth was, by all, esteemed the safest and best way.

The courage of the lion-hearted Elizabeth failed her on this occasion; and she expressed so much repugnance to the loss of her tooth, combined with terror of the pain that might attend the operation, that the eloquence of her whole cabinet could not prevail upon her to undergo it.

Aylmer, Bishop of London, who was present at this grave debate, then stood forth; and after assuring Her Majesty that the pain was less than she apprehended, told her, "that although he was an old man, and had not many teeth to spare, she should see a practical experiment of it on himself," and thereupon, bade the surgeon, who was in attendance, extract one of his teeth in Her Majesty's presence, which encouraged the queen to submit to the like operation.—*Miss Strickland's Lives of the Queens of England.*

ON PUNCTURES OF THE EYE.

By M. Guepin.

M. D. an architect, brought his son to M. Guépin, in 1843. A minute fragment of iron had entered his eye, reaching from the cornea to the capsule of the crystalline lens, and almost touching the iris. It was impossible to grasp the fragment, and an incision would have been difficult, as it lay upon the upper edge of the pupil. M. Guepin accordingly devised the following remedy. He prescribed a collyrium made with distilled water and acetic acid, being persuaded that if the fragment became oxidized at its corneal extremity, the oxidation would spread over its whole surface, and that the dissolution and absorption of the fragment would follow. The event justified his supposition. At the end of three weeks, the cure was complete, with the exception of an almost imperceptible white point upon the capsule, and a very slight cicatrix on the cornea. In another case, the same collyrium was again used with success to carry off the oxide of iron left in the substance of the cornea by a fragment of iron which had remained in it a considerable time.—*Gazette Médicale*, from the *Annales d'Oculistique.*

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, Dec. 7, 1843.

D. P. Evans, Belper, Derbyshire. — E. S. Bellyse, Audlem, Cheshire. — J. F. Mayhew, London.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, December 2, 1843.

Small Pox	3
Measles	52
Scarlatina	59
Hooping Cough	27
Croup	4
Thrush	6
Diarrhœa	9
Dysentery	3
Cholera	1
Influenza	1
Ague	0
Remittent Fever	1
Typhus	41
Erysipelas	7
Syphilis	0
Hydrophobia	1
Diseases of the Brain, Nerves, and Senses	172
Diseases of the Lungs and other Organs of Respiration	399
Diseases of the Heart and Blood-vessels	26
Diseases of the Stomach, Liver, and other Organs of Digestion	56
Diseases of the Kidneys, &c.	4
Childbed	6
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	3
Arthritis	1
Rheumatism	4
Diseases of Joints, &c.	3
Carbuncle	0
Phlegmon	0
Ulcer	1
Fistula	0
Diseases of Skin, &c.	1
Dropsy, Cancer, and other Diseases of Uncertain Seat	96
Old Age or Natural Decay	72
Deaths by Violence, Privation, or Intemperance	25
Causes not specified	3
Deaths from all Causes	1087

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, DECEMBER 22, 1843.

CLINICAL REMARKS
ON
CASES OF CHLOROSIS,
Delivered at St. Thomas's Hospital,
By Dr. Barker.

The object of clinical lectures being to point out the application of the general principles of medicine, to the recognition and treatment of the ever varying forms, and complications of disease, rather than a constant consideration of extraordinary cases and cures, I need make no excuse for devoting a portion of this lecture to an account of three common cases of chlorosis, which have just left the hospital. These cases did not differ, in any essential points, from many others, which you will probably see in the wards during the course of the present winter; and my reason for thus early directing your attention to this class of cases, is, that you may be at no loss to know how they are to be recognised, and to understand the principles upon which the treatment you will see adopted, is founded, whenever such cases occur.

It is the more necessary to call your attention to these cases, because it is easy to mistake this disease form any others; and, even when the disease is recognised, it is seen under a great variety of forms; and is often, *apparently*, complicated with other serious affections. As you will not observe in my practice any difference, or even modification of treatment, corresponding to these various forms and apparent complications, you may, without some explanation, suppose that I am myself setting you the example of not following the rule so frequently dwelt upon in these lectures—that in the treatment of a disease you are not to regard its name, but must consider its stage, the actual condition of the diseased parts, and of the system generally, as well as the constitution of the patients. Now, in chlorosis, the various forms it often assumes, and the many local diseases with which it often appears to be complicated, are generally dependent on one disordered state of system—when that is remedied, and not till then, the local disorders, and all the various complications, disappear; though, to an inexperienced or ignorant person, these complications and local disorders may, at first, have appeared the most formidable parts of, or even the whole disease, and to have merited the greatest share of attention. Moreover, the chance of error in recognising and treating cases of chlorosis, does not arise solely from the danger of considering its modifications and the various symptoms of local affection accompanying it, as principal features of the disease, demanding separate attention; but the real state of the patient—that is, the existence of the chlorotic condition—may be overlooked; and you may suppose it necessary to treat her for some other disease. the symptoms of which may appear to be more or less completely developed. Such a mistake will, in a large majority of cases, be productive of much injury; since the ordinary mode of treating such diseases as are most likely to be suspected when the chlorotic state is overlooked or disregarded, is, in nine cases out of ten, completely opposed to that which the state of the patient requires.

It is true, that in confirmed cases of chlorosis, there is little danger of the real nature of the disease being overlooked. The pallid, leaden, or pasty look of the face; the blanched lips; the pale tarsal conjunctivæ; the blue sclerotic; the dark hue of the skin beneath the eyes; the emaciation; the lost, or capricious and depraved appetite; the hectic which is often present; the disordered secretions, especially the menstrual; the headache, and various local pains, especially in the region of the heart; the languor and debility of body and mind; sufficiently point out the nature of the dis-

ease; and indicate a state of anæmia, with deficiency of the red and more nutritious parts of the blood: and many of the attendant symptoms—the debility, the languor, the headache, the palpitation, the imperfect menstruation—are directly referrible to this cause. But it is far otherwise when the disease is recent, or imperfectly developed: for, although most of the symptoms just enumerated may generally be detected from an early period, they are often so slight as to escape notice; they may exist without chlorosis; and symptoms of other disease, general or local, may be so prominent as to divert the practitioner's attention from the general state of the system; and fix it upon what is really, as regards diagnosis and treatment, an unimportant, though, to the patient, a most distressing part of the malady.

In the three following cases the general symptoms of chlorosis were sufficiently manifest; but were not likely to arrest the attention of an incautious practitioner, so immediately as the violent local pain in the head; the palpitation; and the unnatural sounds heard in the præcordial region, similar to those perceived in organic disease of the heart. Had my treatment been directed to these local symptoms, considering them apart from the general state of the system, my three patients, in place of being well and convalescent, would now be in a confirmed state of chlorosis, with every symptom of local disease increased.

The first case is that of Susan Neale, admitted September 29, æt. 20, a servant, who has never menstruated, though her bodily development does not appear imperfect. She dates her illness six months back; since which period she has become, without any positive disease, languid, and less strong than formerly; and during the last fortnight she has felt incapable of exertion. Since she first felt her health decline, she has suffered much from headache, palpitation, and pain in the chest. All the symptoms, slight at first, have gradually increased. At present she is pallid, with an unhealthy, pasty appearance of the face; the lips are blanched; and there is a dusky hue beneath the eyes. She seems languid; states that she is easily fatigued, and feels unequal to any exertion. She suffers much from headache, which is not constant. Any slight exertion, or mental emotion, causes instant palpitation of the heart; and this symptom often distresses her much when there is no apparent cause for it; frequently coming on in the night, or when she is quite at rest during the day time. The respiration is healthy over the whole chest; and, with the exception of greatly increased rapidity of breathing on slight exertion, there is no sign of disease of the lung. The heart can be heard over a large space, and its impulse against the ribs is sudden and forcible. Over the aortic valves a loud and harsh bellows murmur accompanies each systole of the ventricle; which can be heard distinctly along the course of the aorta, and slightly over the apex of the heart. There is considerable tenderness on pressure of the præcordial region, but she also complains of some tenderness on pressure of other parts of the chest, and of the epigastrium and cœcum. Her appetite is not good; tongue clean; bowels regular; pulse frequent and sharp, but small, and bearing little pressure.

The next case is that of Mary Anne Chadwick, a servant, æt. 17, admitted into Anne's Ward, October 6, 1843. She had good health till four years ago, when she had an attack of fever, which confined her to bed for six or seven weeks; since which she has never completely regained her former health; and has remained pale and weak, suffering from short breath, palpitation, and headache. At the age of 16, the catamenia first appeared; the discharge being pale, but of sufficient quantity. They recurred monthly for four or five periods, and then ceased for four months. Under medical treatment, they returned four or five times; again ceased, and have not reappeared. The discharge gradually became paler and paler, before it ceased entirely. During the whole of this period, the breath had become more hurried on exertion; the pallor had increased, and the headache and palpitation had become more constant, and more distressing.

At the time of her first admission into the hospital, the whole surface was pale, and the countenance rather icteroid, with a dark areola round the eyes. Tongue pale and clean; appetite good, but depraved; bowels costive; pulse 114, small, sharp, but easily obliterated by pressure. Slight cough, and breathlessness on the least exertion; though, on careful examination of the chest, no disease of the lungs could be detected, the sound on percussion being clear, and the respiratory murmurs healthy and loud. The action of the heart was the same as in the last case; and a loud, but soft bruit could be heard over the aortic valves, and less distinctly over the whole præcordial region. Palpitation was easily excited, and often came on without any assignable cause.

The last case is that of Caroline Thacker, admitted into Anne's ward on the 24th October; a servant, aged 21. Her menstruation has never been quite regular in its periods, or proper in quantity or appearance. Five years ago she suffered so much from languor, aching of the limbs, debility, shortness of breath, fluttering of the heart, and pain in the left side, that she applied at Guy's Hospital for advice, and was much

relieved after a fortnight's attendance there. She has never, however, been quite free from the symptoms just mentioned; and three weeks ago, when, after exposure to wet, the menstruation was suppressed, they all recurred; accompanied with increased pain in the head and tenderness on the left side. For this, leeches were applied, and twelve ounces of blood were abstracted from the arm, with no relief to the general or local symptoms; and followed, the next day, by a hysterical fit, to which she had not previously been subject.

On admission, she was pale in the face and lips; rather dark under the eyes; complained of weakness, especially of aching pains in the loins and thighs after slight exertion; headache; tenderness in the præcordial region, and over the chest generally; a feeling of tightness under the sternum; shortness of breath, and fluttering of the heart easily excited. Appetite good. Bowels confined. Tongue pale, and clean. Respiration natural. Pulse quick, sharp, and feeble. There was a sharp, quick stroke of the heart; and, occasionally, a slight soft bellows murmur, accompanying the systole, could be heard.

There were several important points common to all these cases, indicating some generally depraved state of system; and there were other symptoms superadded, *appearing* to depend on local disease in the chest or head. Thus, in all, the disease had come on slowly, occupying many months, at least, in its invasion. There had been gradual loss of bodily and mental vigor; a certain degree of emaciation; increasing pallor of the countenance, shewn, not only in the cheeks, but in the lips, eyes, and tongue; and thus there could be little doubt that the blood had become, not only small in quantity, but deficient in red particles and other constituents. This state of the blood was further proved, in two of the cases, by the scantiness, pallor, and ultimately by the cessation, of the menses; whilst, in the other case, the same state might be inferred from the non-appearance, at the age of 20, of that secretion; although there did not appear to to be any physical impediment to its production. Moreover, the feebleness and increased excitability of the vascular, and augmented sensibility of the nervous system, resembled, in all respects, that which takes place in anæmia, from whatever cause that state may be produced.

These patients were, in fact, all in an early stage of chlorosis; a stage which has been thus well described:—"Slight paleness, or a little fading of a wonted florid complexion, and the patient is only a little more languid and listless than usual, the ordinary amusements or occupations, whether mental or bodily, being accompanied by fatigue; the nights restless, the mornings heavy; recurrent headache; pain in the left side, palpitation, &c. The catamenia *are supposed* to flow as usual, but an attentive inquiry discovers, that, with the complexion, the uterine discharges also lose their colour.

This is the first stage of chlorosis. In its second and confirmed stage, every symptom is aggravated, and the patient falls into a state of amemia, with all its attendant evils. But, notwithstanding the urgent nature of the symptoms, and great constitutional derangement shown by the increasing pallor, and the unhealthy hue of the countenance; debilty, often extreme; most distressing sensibility; emaciation; suppressed menses; lost or depraved appetite; irregularity of the bowels; and many other derangements; there is very frequently some predominant symptom, absorbing all the attention of the patient, and too frequently misleading the medical attendant. This symptom is generally severe pain, often fixed, though not unfrequently wandering from part to part. It most commonly affects the head; the left side, about the apex of the heart; or some part of the course of the colon; and, very frequently, gives rise to the idea that formidable local disease exists in those parts. This mistake is the more likely to occur when the pain is in the chest, and accompanied by cough and palpitation. These severe local pains, however, are by no means confined to the latter periods of the disease: they not unfrequently occur long before any of the general symptoms would lead you to suspect chlorosis. The risk of error is then great; and it is only by carefully considering the character of the pain, and finding all other symptoms of local inflammation wanting, that you can hope, in such cases, to avoid the error of having recourse to antiphlogistic treatment, which, after entirely failing to relieve the local evil, will inevitably promote the progress of the main disease.

It must be obvious that the first two of these cases were beyond the first stage, but had hardly completed the second; and that the last case (Thacker) was in the early stage. In all, however, there was the one predominant symptom absorbing the attention of the patient; and so far likely to delude the medical practitioner, that the mildest of the cases, the only one which had recently been under medical treatment, had evidently been mistaken for one of local inflammation; and had, under that belief, been bled and leeched. I pass over the headache noticed in all these cases; because, although it was severe, it was irregularly intermitting, and being unaccompanied by any other sign of cerebral affection, little danger existed of its being mistaken for inflammatory disease requiring depletory measures. But there were

signs of chest affection, especially of the heart, which might easily have misled the unwary. In the first place there was pain: but it was not the pain of any known inflammatory or organic disease of the chest. It was not the constant, dull pain of pneumonia, nor the more sharp and tight pain of bronchitis, nor the sudden acute pain of pleurisy; all, especially the latter, increased by cough or the movements of respiration; neither was it the severe pain of rheumatism, increased by pressure of the intercostal muscles, and becoming severe on any sudden movement of the trunk; nor was it the pain of cardiac disease, sometimes fixed, sometimes shooting to the spine, the shoulder, or left arm, and almost always increased by firm pressure; but it was a tenderness, rather than pain; sometimes felt principally in one part, and sometimes in another; not augmented by the movements of the patient; and although increased by pressure, pressure so slight that it could not possibly have produced any effect on internal parts, and scarcely any even on the intercostal muscles, caused as much pain as the most forcible pressure that could be made. There was, moreover, an absence of all other signs of any of these diseases, except the heart symptoms, to be alluded to directly; and this, together with the character of the pain, would in these, and may in most similar cases, enable you to avoid the error of mistaking such morbid sensibility for inflammatory or organic disease.

It is a peculiarity in chlorotic and hysterical cases, for which I cannot account, that the severe local pains, of which complaint is so frequently made, are very often referred principally to the heart. This circumstance often gives rise to the idea that the heart must be diseased, and leeches, blistering, &c. are had recourse to, without benefit, and too often to the great injury of the patient. In many of these cases, if the practitioner who makes such a mistake would ask himself what disease of the heart he is treating, he might avoid falling into a grievous error, and save his patient much useless and injurious treatment; for he would find that *pain alone*, whatever may be its seat or character, is no proof of *any* heart disease; and he would, by a careful examination of such cases, find that the pain, though often referred by the patient solely to the precordial region, is not really confined to that spot, but that other parts of the chest are, though perhaps in a less degree, tender on pressure.

The case becomes rather more difficult when, as in those now under consideration, there are, in addition to tenderness, other symptoms of diseased heart: increased impulse, palpitation, and abnormal sounds.

In all the three cases, though in different degrees, the stroke of the heart against the ribs was so sudden and sharp, and accompanied by so loud and distinct a sound, that it was difficult, at first, to lay aside the idea of the heart being increased in size, and its contractions stronger than natural; but more careful examination shewed that the parietes of the chest were not moved by the heart's impulse, that there was not a long-continued heaving over the heart, during the whole of the systole, and that the sound was not dull, or confined to a small space, as is invariably the case in hypertrophy. On the contrary, the sudden, sharp stroke felt at each systole, did not perceptibly move the hand or the head when applied to the region of the heart; the slight impulse which could be felt was momentary, and only felt at the apex; and the sound was loud, clear, and heard over a large space, although there was no consolidation of the lung to convey it to a distance. Percussion proved that the heart did not occupy more than its ordinary space. The pulse also, though frequent and sharp, was small and feeble, not full and strong, as in cases of hypertrophy. Finally, the impulse of the heart, the loudness of its sound, the frequency and strength of the pulse, were greatly, and much more easily than is usual in hypertrophy, varied by the position of the patient, by bodily exertion, or by slight mental emotion.

Palpitation was another of the symptoms, present in all these cases, which may exist both in functional derangement and organic disease of the heart. But, in organic disease, the palpitation is either constant, or, when it comes on in paroxysms, is referrible to some cause: in nervous palpitation, whilst bodily exertion and mental emotion often bring it on, it as often comes and goes without any assignable cause; absent, perhaps, when the patient is taking gentle exercise, and has the mind moderately excited; coming on when she is quiet and at rest. A due attention to these differences, and the absence of all other proofs of organic disease, will enable you to avoid any error which might arise from mistaking nervous palpitation for that which attends other disease of the heart.

But bellows murmurs were heard in all these cases; in two of them very loud and constant, differing in no respect from those which are heard when there is disease of the aortic valves obstructing the flow of blood from the ventricle. I shall not inquire now what is the immediate cause of bellows murmurs accompanying functional disease of the heart. That they do exist, without disease of the valves, must be admitted, and I know of no peculiarity, in the seat and nature of the sounds, by which we can distinguish those arising from organic disease from those which have some other, and that a

temporary origin. The only rule, as regards the sound itself, which I can give you, is, that it is seldom harsh; (it was so, however, in the case of Susan Neal;) so that if you hear a rasping or sawing sound, it is more likely to arise from organic than from functional disease; and, in functional disease, the sound is always systolic. It is principally, then, by a consideration of other points, that we must determine to what cause these sounds are to be ascribed. If they are permanent in their seat and intensity; if they are accompanied by other signs of diseased valves, such as hypertrophy, dilatation, &c.; if the palpitation, when present, partakes more of the character of that attending organic than of that arising from functional disease; we may feel sure the valves are diseased. If, on the other hand, there be the general symptoms of hysteria, or chlorosis; if there be no signs of hypertrophy or dilatation of the heart; if the sounds vary in the position where they can be best heard, and in their loudness and character; we may feel pretty sure that no organic disease exists. This latter sign of the disease being functional is often very remarkable; and was observed, sooner or later, and in different degrees, in all three cases. The bellows sound may be loud one day, faint, or not perceivable, the next, and then return; it may be absent when you commence examining the chest, but become evident before you have finished: a little excitement, or slight bodily exercise, will sometimes cause it to disappear and sometimes cause it to return. Many of you must have noticed this in Chadwick and Thacker.

In estimating the value of these various modes of distinguishing between organic and functional disease of the heart, it is plain that some of them may be appreciated at the first examination of a patient, whilst others can only be made use of, for the purposes of diagnosis, after repeated visits. Hence, it may often be necessary to delay giving a decided opinion as to the nature of a case: circumstances may make us think one or other form of disease most probable; but, if our opinion is given too hurriedly, we may, ere long, be compelled to retract it. In the cases now before you, we could at once detect that the heart was not much larger than natural; that the impulse was not that of hypertrophy; and in two, Chadwick and Thacker, the mode in which the disease came on; their general appearance; the character of the pain and palpitation; the absence of all *positive* signs of heart disease; the kind of impulse, sound, and pulse; sufficiently proved the nature of the case. There was more difficulty, however, in the case of Neal; for, whilst many of her symptoms were merely slight modifications of those observed in the others, the impulse of the heart was not very unlike the heaving observed in hypertrophy of that organ; and the loud, harsh sound, accompanying the systole, heard over the aortic valves, and extending along the arch of the aorta, had far more of the character of the sound which *usually* attends diseased valves, than that which *usually* attends functional disease; besides which it was permanent, and unaltered for many days. I should have been in great danger of doubting in this case, had I not recently had under my care a young person, with similar sounds, which were even more permanent than in Neal. She had general symptoms of chlorosis, and I treated the case as such; but no change took place in the impulse or sounds of the heart, for more than three weeks. I was beginning to express doubts as to the correctness of my opinion, and feared the case was one of diseased valves as well as chlorosis, when improvement began to take place; the countenance regained its healthy appearance; and, at the same time, the sounds of the heart gradually resumed their natural character.

Bearing this case in mind, and considering all Neal's symptoms, I felt little hesitation in classing her with the other two—chlorosis was the disease in all. It was from the first evident that the symptoms of heart disease were fallacious in two; so probably in all. The same treatment was adopted for all: meat diet, or milk and farinaceous diet, according to the wish of the patient; the only one who chose the latter, soon asked for meat. The medicine for all was quinine, sulphate of iron, and a few drops of sulphuric acid, in peppermint water. This was continued till they left the hospital: Neal on Oct. 24th; Chadwick on Oct. 31: and Thacker on Nov. 12. The latter had omitted her medicine for a week, immediately after it was commenced, in consequence of a severe cold. In every case some amendment was perceptible soon after the iron was commenced. The countenance assumed a more healthy colour; the pulse became stronger, whilst it diminished in frequency; the bodily strength increased; the patients expressed themselves as feeling better; the appetite became more natural; and an improvement took place in the action and sounds of the heart. This improvement was not equally rapid in all; and in none did it continue without occasional checks — the pain, palpitation, &c. sometimes increasing. All had recovered their healthy appearance, to a great extent, before they left; were free from local pain; and had neither palpitation nor abnormal sounds of the heart. They would all have been kept longer in the hospital, had not one been obliged to leave; and the others had an opportunity of going

into the country, where they could continue the use of medicine, giving them a better chance of complete and permanent recovery than if they had remained confined closely to the wards of an hospital.

Before concluding, I must call your attention to one important feature of chlorosis, well illustrated in these cases. They all, after great improvement in every other respect, continued to complain of headache, and tenderness about the chest, especially at the left side. Whilst every other part of the malady is rapidly disappearing, the local pains very frequently remain, little, if at all, diminished, and do not disappear till the patient is quite convalescent in all other respects. When this was the case I formerly thought it useful to apply blisters, and even a very few leeches; but now, unless the chlorotic condition be slightly developed, and the pain very severe; or, unless it be absolutely necessary to do something to satisfy the patient; I rarely have recourse to such means; being convinced that, in a large majority of cases, they are not required.

I will conclude by a question—These cases rapidly became convalescent whilst using good diet, iron, and quinine: what, then, must have been the consequence had they been bled, leeched, blistered, purged, and salivated, under the impression that they were affected with disease of the heart or pericardium, pleurisy, or chronic meningitis? Such practice is sometimes followed in consequence of these mistakes; and we occasionally see the results in the pallid, exsanguineous, nervous, and debilitated creatures who are admitted into the wards.

THE NEW FORM OF FEVER AT PRESENT PREVALENT IN SCOTLAND.

AN ACCOUNT OF THE GLASGOW EPIDEMIC.

By William Reid, Surgeon, Glasgow.

(For the Medical Gazette.)

About twelve months ago, a form of fever made its appearance in Glasgow, which, in its progress, presented phenomena totally different from any epidemic of this disease, and whose symptoms and duration contrasted strongly with typhus, to which that city is constantly subject. My attention was first attracted to it, towards the end of January of the present year, by being called to visit individuals who had been discharged convalescent from our excellently conducted Fever Hospital. Scattered cases, gradually increasing, occurred in February, March, April, and May; but during the five following months these multiplied to an extent unparalleled in the history of diseases of this country—ten times outnumbering the cases of cholera in its worst days. Under certain predisposing circumstances, it spread with unexampled rapidity, attacking every member of a family in quick succession, so that, notwithstanding the short course of the disease, five to ten patients were frequently seen at one time, and in a single apartment, huddled together in the different stages of the malady. It will scarcely be credited, that in one tenement, separated from other buildings, but most numerously inhabited, upwards of one hundred victims were affected in less than three months. I am certain, however, from information derived from the surgeon of the district, that this statement, if incorrect, errs not on the side of exaggeration.

The symptoms of this febrile disorder are universally ushered in by rigors, whose intensity and suddenness determine the character of the attack. The patient, for the most part, is then immediately confined to bed; he often vomits a considerable quantity of bilious fluid; always complains of pain in the head, back, and extremities—the first especially being of a most constant and aggravated description. The prostration of the animal powers is most overwhelming, and is usually accompanied by despondency of mind. The thirst is very urgent, and no sleep is obtained until the crisis of the disease, unless it be artificially induced. The pulse ranges from 100 to 120, seldom lower than the former, though frequently rising ten or twenty beats above the latter number towards the subsidence of the disease, when it loses its strength and fulness, and sinks to an alarming extent. Tongue is coated with a thick white or yellow fur, through which the florid papillæ sometimes appear, especially towards the tip and edges. Occasionally, when hæmorrhage occurred, or when the crop of purple petechiæ was copious, the tongue became brown or black, and sordes collected on the teeth and lips. The skin, for four or five days, is generally hot and dry; after which spontaneous diaphoresis often leads to a favourable termination. The bowels are for the most part constipated.

These are the symptoms of a well-

marked case, but these alone would not enable us to distinguish between this fever and typhoid or continued fevers. The short duration of the disease, and the sudden transition from violent excitement to a regular pulse and a cool skin, are, however, so astonishing and unexpected, as at once to determine its character. The disease runs its course in from five to seven days—never in my practice terminating earlier than the fourth, or continuing longer than the eighth day. The crisis is generally preceded by copious perspiration; in some cases this obtains to an excessive degree, and is introduced by shivering. I have often seen a patient in this state—lying on back with livid and anxious face; eyes sunk, glassy, and injected; voice hoarse, and barely audible; extremities cold; and the whole surface covered with clammy sweat, saturating the bedclothes with moisture. Here, so overpowering were the sense and appearance of exhaustion, that, but for a knowledge of the history of the prevailing epidemic, the patient would have been declared moribund. After a short struggle the poison seemed banished from the system, and convalescence slowly ensued.

Although these may be considered the most prominent and constant features of the disease, there are several occasional concomitants and consequences, which I will briefly notice according to the frequency of their occurrence.

The most remarkable and invariable circumstance connected with this form of fever is its tendency to relapse. Dr. D. Craigie, in his account of the epidemic as it prevailed in Edinburgh, graphically detailed in the October number of the Edin. Med. and Surg. Journal, states, that, of his patients, 110 relapses occurred out of 182 cases—equivalent to 60⅘ per cent. In Glasgow the proportion is very different. Here it is considered an exception to the general rule if the disease do not recur. Five per cent. of my own patients did not escape a second attack; which, unlike the same occurrence in common fever, supervened independently of atmospheric exposure or errors of diet. The interval generally occupies the same number of days as the preceding attack. Ten or twelve days, however, sometimes intervene; and in one case mentioned to me by a medical friend, the interval was extended to the twentieth day. A chill is then felt, and the disease again sets in; usually, however, of a milder character, and shorter by a day than the former attack. Occasionally in infancy, or where the patient had been previously affected by some chronic complaint, the relapse occurs a second or even a third time. Unlike Dr. Craigie, I have seldom or never found the tongue become clean, or the appetite keen, after the pyrexia; on the contrary, the tongue continued foul, and an actual loathing of food was often present, and persisted in spite of all remedies exhibited. Indeed, the inertia of the stomach during convalescence seemed to me to be the most strongly marked characteristic of the disease.

Towards the close of the first attack, in the intermissions, and during the recurrence, there exists a great tendency to discharge of blood from the mucous surfaces. I seldom found these to produce any relief to the patient, or to retard his recovery, although several pounds of blood frequently escaped, especially from the nose or bowels. In one girl aged 14 years, of stunted growth and unhealthy aspect, it proved fatal during convalescence after a first attack. In the forenoon of 20th June, she menstruated for the first time; about an hour afterwards she became sick, stupid, and vomited a large quantity of clotted blood. She then had a similar evacuation from the bowels with syncope; and when visited at mid-day, I found her dead on the floor. A few drops of blood had oozed from the left ear. The presence of this fever, like the sweating fever of Normandy, exerts a most powerful influence on the uterine system. It is almost always accompanied by profuse menstruation, and if the patient be pregnant it most certainly induces abortion or premature labour; in the latter case the child dies.

Yellowness of skin, with or without irritation of stomach depending on biliary derangement, is often to be met with. The discolouration in some cases extends over the whole cutaneous surface, beginning at the temples, equal in intensity to the worst forms of jaundice; in all the skin retains a dingy paleness for weeks after the cessation of the

fever. According to my experience this complication did not add to the danger of the patient, though in hospital practice I understand it frequently led to a fatal termination.

Articular rheumatism, various in degree, delirium chiefly of a hysterical character, and diarrhœa with copious bloody stools, are not uncommon symptoms. These usually occur in the intermission, and are speedily removed by opiates in the form of P. Doveri. In some rare instances we find anasarca affecting the lower extremities, with pain and fulness in the region of the liver and spleen.

It has been frequently proved by the statistics of typhoid fever, that the period of life determines the liability to an attack, and likewise its mortality. It spares the extremes of life; but when it seizes an aged victim a fatal termination may always be predicted. In this respect the present epidemic offers a striking contrast. It displays no partiality for particular ages, embracing the newly-born child, and the old man on the verge of the grave, as readily as the young and the middle-aged. I lately saw an infant eight days after birth studded with purple petechiæ, and a woman in her 84th year, presenting exactly the same appearance. Most providentially the mortality produced by the disease was trifling, and almost altogether confined to children under two years of age, or persons who were otherwise constitutionally unsound.

Is this form of fever contagious? When a disease prevails extensively in particular districts, and simultaneously affects subjects of a particular class, it is sometimes difficult to determine whether the prevalence is produced by contact with the sick, and exposure to the effluvia generated by them, or depends upon some unappreciable constitution of the atmosphere arising from local or general causes. *Individual* cases of suspected contagion, however strong and carefully detailed, can never furnish conclusive evidence of the fact; but when these instances *multiply*, and occur under various circumstances, doubt is thereby changed into certainty, and we are fairly entitled to adduce such accumulation as unquestionable proof of the communicability of a disease depending on intercourse with the sick. Numerous opportunities of thus testing the contagious nature of the present epidemic have presented themselves during its progress through the lanes and closes of this city and suburbs. A few illustrations may be given, but, it must be borne in mind, that *almost every medical man* actively engaged in the treatment of the epidemic *could also enumerate examples of the same description.*

When for the first time a person was attacked in a house or district, the disease radiated from him, and that too in exact proportion as the communication between the healthy and sick was more frequent, close, and intimate. In the densely populated parts of the city, occupied by the lowest order of the working classes, two or more families frequently inhabit the same dwelling. When the disease appeared in one apartment it first attacked all its occupants; then spread to the room adjacent, and afterwards sought its victims in the rooms on the same floor in the order of vicinity and intercourse. The manner of its introduction and propagation among the numerous families at Dalmarnock colliery is a case in point, and deserves to be recorded, as furnishing—to say the least of it—a very strong probability of the operation of contagion. Forty families occupy a large tenement of three stories entered by three separate stairs. The building stands alone and is surrounded on every side by open fields. At last Whitsunday term an Irish family removed to a single apartment on the upmost flat reached by the middle stair; the youngest child was at that time sick of the fever. On the 2d June the father sickened, and in succession the whole family. It then spread from house to house, and ultimately descending a stair, settled for a time, having in the space of two months attacked 22 patients. The supporters of malaria as the origin of the disease may doubtless here aver that the removal of the patient and the appearance of the fever in a locality previously healthy, were merely accidental; but I suspect they will find few with faith sufficient to believe in so curious a coincidence. Again, the disease was introduced by a person from a neighbouring village into a house of two apartments, situated in Mile-end, and containing within its narrow walls eleven human beings. All of these were attacked, and every

one relapsed; but in the next honse, with a similar entry, and separated only by a brick partition, where the occupants were nearly equally numerous, and from their circumstances and habits equally susceptible, all escaped. Now if contagion was not here the agent in operation, but a vitiated state of the atmosphere from some unknown cause, or from local telluric emanations, why were the ravages of the fever confined to this dwelling only; and why did its baneful influence not extend to the adjoining house, and to others around it? Moreover, during the progress of the fever in Glasgow several of the medical attendants have been seized by it, and I understand that in the Fever Hospital most of the medical clerks who reside in the house, and the sick nurses, have also suffered severly from attacks of the disease.

Although I think that contagion is the mode by which this febrile disorder is mainly propagated, and is perhaps its imported source, there are several circumstances which undoubtedly favour the diffusion of the disease, or increase its communicability by predisposing the patient for its reception. The most prominent and prevailing of these are impure air, want of, and impure, water, scarcity of food, and deficiency of clothing. In Glasgow the combination of these powerful influences in the extension of all contagious diseases seems to be considered the natural birthright of poverty, as long-sustained exertions are seldom employed to ameliorate or remove such frightful sources of physical suffering, and its almost universal companion, social degradation. The crowded abodes of the working population, and especially of the poor, are almost universally built without regard to ventilation, and, from the neglect of sewerage, are generally damp, and consequently filthy. A number of *hydropathic* societies have lately been formed in Scotland; and I do most certainly expect much good to result from the exertions of their members. If they be the means of impressing upon the minds of the inhabitants the importance of the frequent and ample use of cold water, externally and internally, for health and comfort, they will have conferred an incalculable amount of benefit on the community. I would, however, respectfully suggest, for the consideration of these societies, the oft-repeated axiom in cookery, "to catch the hare," before proceeding further in the operations of the kitchen. Let them see that the supply of water is pure and abundant, and that blankets are plentiful, and I promise them that their efforts will be eminently successful, if not in curing disease, at least in preventing its extension, by increasing the bodily vigour and the mental activity of the poor. The supply of water for the large towns of the United Kingdom, where, from the congregation of multitudes, a profusion of it is most requisite, is notoriously deficient; and it would be a subject not altogether unprofitable, for one curious in statistical inquiry, to determine how many tons of mud the inhabitants of Glasgow annually drink. Added to this, the wells, at least in the suburbs, are frequently placed in the streets at a distance from the houses of the poor water-rate payers, who are thus naturally led to an economy of this essential element in their domestic and detergent occupations: besides, a still more crying evil results from this disposition of the wells; a stream of running water is thereby denied to the closes and courts, &c.: thus the only means of perfectly removing the stagnant pools of contaminating accumulations cannot be obtained but at increased expenditure of time and labour.

Dr. Craigie seems disposed to regard the disease as a variety of remittent fever, he having frequently observed, in Edinburgh, a tendency to a remission of the symptoms on particular days. My experience, which has been but too extensive, is directly opposed to this opinion. I, without exception, have found the symptoms most continued — far more so even than in typhus, where we often find a diminution of the excitement in the morning, with an exacerbation towards evening.

In our treatment of this epidemic we have derived very little advantage from following the methodus medendi of typhoid or synochoid fevers. In these the early exhibition of an emetic, followed by a free purge, frequently seems to arrest the progress of the complaint, or at least to moderate the violence of the symptoms; and this more particularly where the stomach is loaded with injesta, or where exposure to cold may be suspected as the exciting cause of the fever. Here,

notwithstanding the clear evidence of biliary derangement, and consequent gastric irritation, an emetic never checked the course of the disease; and even the immediate improvement was very evanescent. Indeed, the beneficial effects produced by the administration of medicine, at the commencement, and during the first three or four days of the disease, were far from satisfactory; the patient, at each visit, having some new source of ailment to add to his irritability of temper, depending on his constant wakefulness. Our treatment principally consisted, at the onset of the disease, of mild emetics, with purgatives containing calomel; and towards the close, of opiates at bed-time. A full dose of muriate of morphia, combined with antimony, or Dover's powder, seldom failed to induce sleep and relieve the headache, which seemed to be often neuralgic, and sympathetically present from an excess of acrid bile in the primæ viæ. The complications of rheumatism and diarrhœa during convalescence were quickly removed by the same means. Delirium also, which in some rare instances supervened in the intermission, readily yielded to the same treatment, or to the exhibition of a couple of drachms of the morphia solution by the rectum. This soothing treatment was most grateful to the patient, who seldom failed to urge his medical attendant to a repetition of the medicine. Leeches to the temples very seldom produced much relief to the pain of the head; and the sense of debility was so overpowering as to lead to caution in the use of the lancet. After watching the effects of large spontaneous hæmorrhages upon the system, and observing that the debility was never thereby augmented, but sometimes lessened, I tried venesection in sound constitutions. The crassamentum of the blood was always firm, cupped on its surface, and covered with a thick firm pellicle of lymph; but the benefit derived from the adoption of the practice was not such as might have been expected from the inflammatory character of the blood. Two male patients presented, during recovery, most violent maniacal symptoms, and were successfully treated by repeated blisters to the head, and mercurials.

In the interval various medicines were prescribed, with the hope of preventing a recurrence of the distemper. Alteratives, with quinine, iodine, and iron, were unsuccessfully used. Within the last month I have ordered the arsenical solution with this intention, and occasionally with *seeming* success; it is, however, more than probable that this partial success depended on the reduction of the temperature of the weather which then set in. The medicine, besides, can only be fairly tested in hospital practice.

15, Orr Street, Glasgow,
Nov. 20th, 1843.

CONTRIBUTIONS TO THE PHYSIOLOGY OF THE HUMAN OVARY.

By Charles Ritchie, M.D. Glasgow.

(For the Medical Gazette.)

The following dissections were made by the writer during the last three years and a half, while he occupied the physicianship of the Royal Infirmary, and the notices of them were engrossed in a common-place book at the time. In undertaking the investigation, he was influenced only by a desire to avail himself of the advantages of his position in regard to a subject having a physiological, and, in its relations to jurisprudence, a moral interest of no ordinary kind. No one can be more sensible than he is, how far, from the pressure of more urgent avocations, and other causes, he has fallen short of his object; and in submitting his researches to the profession, when from circumstances he cannot longer continue them with the same facilities, he is influenced rather by a wish to suggest the subject, under some modifications of form, to others, than by any notion that, in his hands, the inquiry has been exhausted. The paper has been arranged into a detail of cases and a summary; the former being subdivided into two parts, and each of these respectively into several sections as follows:—

Part I.—Dissections of the human ovary in cases in which impregnation had never obtained.

II.—Ditto in individuals who had been pregnant, the ovaries being examined at different periods of utero-gestation, or, after delivery.

Under Part I. are examined

Section I.—Ovaries in subjects which had not menstruated.

II.—Cases in which menstruation had existed regularly, the parties never having been pregnant.

III.—Cases in which menstruation, although commenced, had never been regularly established, the individuals not having had children.

IV.—Cases in which menstruation had continued regular for a longer or shorter period, but had been suppressed for some time before death, the women never having had children.

V.—Cases in which the subjects had outlived the menstruating period of life without children.

Under Part II. are examined

1. Ovaries of parties either supposed or really pregnant, examined before the completion of gestation.

2. Ovaries of women who died within one month after delivery at the full period.

3. Ovaries of women who died within, or at, two months after delivery at the natural period.

4. Ovaries of women dying from two to three months after delivery at the natural term.

5. Ovaries in individuals dying four months after natural delivery.

6. Ovaries in women five, six, seven, ten, twelve, and thirty-six months respectively after natural delivery, menstruation not having been re-established.

7. Ovaries in subjects who had had children, but were afterwards menstruating.

8. Ovaries in individuals who had had children, and in whom menstruation, re-established, had been arrested by disease.

9. Ovaries in persons who had had children, and who had ceased to menstruate from age.

Part I.—Dissections of the human ovary in cases in which impregnation had never obtained.

I.—Ovaries in subjects which had not menstruated.

1. A healthy new-born infant at full time. Fallopian tubes and uterus could not be permeated by air, but on examining the os uteri it was found occupied by a plug of thick tenacious mucus, of the colour and consistence of glue, which also filled the uterine cavity, dilating the former to a size equalling that of the tip of the little finger, and permitting the arborescent structure of the cervix to become visible. On removing this mucus, which was effected with difficulty, the last portions being tinged with blood, air was made to pass with ease from the pavillon of one of the tubes to the os tincæ. Ovaries scarce an inch in length, or two-eighths broad, of a triangular shape, the apex being represented by the free mesial line of the gland, and the base by its sessile portion expanded on each side into a loose margin, which was denticulated by several notches. Outer surface of ovaries smooth, and of a uniform fawn colour, and in interior of one of them two vesicles were distinguished.

2. An infant sixteen weeks old. Fallopian tubes transmitted air with great facility. Right ovary one inch in length, and two-eighths of an inch in breadth at centre. Left ovary seven-eighths long, by two and a half broad. No foramen or cicatrix could be detected on their external surface, which was observed by means of a simple magnifier, however, to be occupied every where with the appearance of minute pores, aggregated at some parts into indentations, visible to the naked eye. On boiling, and then cutting the glands vertically, their interior, especially that of one, was found thickly studded with extremely delicate vesicles, filled with a milky fluid, varying in size from that of a pin's head to a mere point, and which became speedily flaccid, and finally disappeared on exposure to the atmosphere, apparently from absorption of their contents.

3. —— Goulden, aged 5½ years. Fallopian tubes pervious to air and quicksilver. One ovary one inch and a quarter long, and two and a half eighths of an inch broad, and the other thirteen lines in length, and two and a half eighths in breadth. On one of these a transparent spot was observable, which, when viewed by a common two-inch glass, was found to be a very delicate diaphonous vesicle, of the size, when thus magnified, of a mustard-seed, and surrounded at its base with an opaque or white ring. Immediately adjacent to this was a dark spot of the supposed diameter of less than a line, which examined by the magnifier, seemed to consist of a central puncture surrounded by ecchymosis. Several other copper-coloured spots, in one no less than six, were observed in both ovaries, but without the

central opening. These appeared to be occasioned by Graafian vesicles, with their coats in a high state of vascularity shining through the peritoneal covering of the glands. In other respects surface of ovaries smooth. On boiling one of the ovaries, and dividing it vertically at its centre, seven or eight vesicles came into view in different parts of the gland. The best developed were situated almost immediately under the peritoneal coat. One of the largest was of the size of a mustard-seed, had an opaque capsule, and contained an angular-shaped, reddish-coloured coagulum. The capsule of another was of a brick-red colour, and contained a coagulum which was of a lighter shade in its central part, but surrounded by a delicate disc of what appeared to be dark-coloured blood.

4. —— ——, æt. 13 years. Ovaries one and a half inch long. Suface free from any solution of continuity, but studded with numerous vascular spots of size of coriander seeds, which were produced by Graafian follicles situated at varying depths from surface; some adherent to inner aspect of peritoneal covering, and others projecting this membrane before them into a small elevation, over which the peritoneum was thinned and vascular. One of these vesicles insulated and examined by a powerful microscope, exhibited a number of such vessels ramifying on its surface, and in its interior, the ovulum adherent to the proligerous disc, and containing at the point at which it was thus in contact, the vesicle of Purkinje. The granular nature of the fluid of the Graafian vesicle was also observed. The ulcer, of the size which it is in the infant, contained a starchy-looking fluid.

5. —— ——, æt. 14. Surfaces of ovaries presented numerous livid points produced by Graafian vesicles shining through the peritoneal coat, and some capillary openings were observed at different parts. These latter did not permit of the transmission of a bristle by them into the gland, or lead into any cavity, but were mere points limited to the external aspect of peritoneal covering, and no cicatrices such as are found in the adult, were observable anywhere. Interior of ovaries filled with ovisacs of a very minute size, the largest not greater than a pin-head. Some of these were very near the surface, covered with an indusium of the ovary, and under their outer proper coat beautifully injected with red vessels. The fluid contained in them was of a rich amber colour. The fallopian tubes were filled with white mucus.

6. —— ——, æt. 14. Ovaries of medium adult size and plumpness, but without a wrinkle, cicatrix, fissure, or any thing remarkable on their surface, except three minute spots, two on one of the glands, and one on the other, which appeared to be Graafian vesicles situated behind or in the texture of the peritoneal coat, and one of them, which to the naked eye was not larger than one third of the size of a pin-head, was apparently a projection through the peritoneum of a segment of the vesicle, its base being surrounded, as seen by a common magnifier, with an opaque ring. Interior of ovaries surcharged with vesicles, one of them as large as a small raisin, the others varying from the size of a hemp-seed to that of those on the surface. These latter were full of fluid, but their coats seemed less vascular and more attenuated than those of the others. No vestige of any vesicle having ever been ruptured was perceptible.

7. —— ——, æt. 15 years. Ovaries of adult size: one of them in particular had its surface stained with numerous whitish points of size of millet-seeds, which were found to proceed from Graafian vesicles shining through peritoneal covering. This latter was completely destitute of cicatrices, except in one of the ovaries, on which was observed one point, best seen with a magnifier, which appeared to consist of a minute foramen, having its edges of a slightly red colour. Inner surface of both ovaries occupied by the usual membranous pulp of considerable thickness, and giving the idea of a series of horizontal layers of fine tissue, each thickly interspersed with vesicles of different sizes and grades of development, embedded or suspended in its structure. Some of these had advanced, seemingly by a gradual progression from the central parts of the gland, about half way through the peritoneal coat, and one of them opened by a rather blunt lancet, with no more pressure applied to the surface of the ovary than was necessary for its retention between the fingers, squirted its contents a distance of about twelve inches.

8. —— ——, 16 years of age, and never menstruated, although her general and uterine systems well developed. Ovaries large, and studded with blue spots about the size of corns of barley, which corresponded with Graafian vesicles, with which both glands were filled. No cicatrices or wrinkles of any kind on surface.

This girl appeared to have been a prostitute. The genitals were ulcerated, and a vesicle filled with lymph, of about the size of a Spanish nut, hung from the pavillon of left fallopian tube.

9. —— ——, æt. 17½ years. Had not menstruated or had a child. Health delicate, and labia of uterus granulated. Both ovaries plump, of good size, perfectly smooth, and exhibiting a few minute mahogany-coloured spots on exterior. Internally they were filled with vesicles, many of them as large as small dried peas; some of which were vascular, although the greatest number were pale and somewhat flaccid. No traces of a rupture in any case in which it could not be ascertained positively that menstruation had not taken place, but inferentially only, from the circumstance not being *noted* in the usual way in the register.

10. —— Martin, æt. 19. A prostitute. Had not had a child, as judged of by register, by absence of lineæ albicantes on mammæ, thighs, or abdomen; by fact of os uteri retaining its normal form as seen previous to parturition. Some adhesions around ovaries; the outer aspect of both of which latter was smooth and free from cicatrices. Some vesicles of size of a hemp-seed, with vascular coats, were observed in the central parts of both ovaries, while more laterally, and immediately under the peritoneal coat, they were smaller, their tissues pale, and over some of them a minute blister was observed in the periphery of the ovary, and in others the appearance of capillary puncta, one of which actually led into an empty Graafian vesicle situated in the peritoneal covering of the gland, of about the size of a mustard-seed, and was surrounded by some appearance of ecchymosis.

[To be continued]

THE PHYSIOLOGY OF THE LARYNGEAL NERVES,

ILLUSTRATED BY PHENOMENA OBSERVED IN A CASE OF ANEURISM OF THE ARCH OF THE AORTA.

To the Editor of the Medical Gazette.

Sir,

He who watches the effects of disease is enabled occasionally to throw some light upon the labours of him who observes the operations of health. The student of pathology is now and then presented with facts, which afford considerable support to the inferences deduced by physiological experimenters; and when he is in the possession of such facts it becomes his duty to make them known for the interests of science, and the gratification of its cultivators. Under this impression I will endeavour to relate, as shortly as possible, some particulars of a case of aneurism of the aorta, (recently under the care of Dr. Gordon, in the London Hospital) which bears upon the functions of the superior and inferior laryngeal nerves, as investigated and ascertained by Dr. J. Reid.

During the progress of the disease in the patient already alluded to, some phenomena presented themselves not unusually remarked as the consequence of the gradual enlargement of an aneurismal tumor in the chest. Of these, a most marked alteration in the strength and pitch of the voice, and the occasional occurrence of paroxysms of suffocative dyspnœa, were the symptoms which denoted an interference with the due performance of the functions of the larynx.

The alterations in the voice, from what was manly and deep-toned to a squeaking whisper, must have depended upon a narrowing of the glottis, and a stretching of the vocal ligaments,—a condition which could only arise from the predominating influence of only one set of muscles. This influence must have been exerted by the crico-thyroid and sterno-thyroid, since the effect of their contraction is to produce a tension of the chordæ vocales by depressing the front of the thyroid cartilage on the cricoid; and if their actions were perfect, their supply of nervous energy must have been normal; while as

the remaining muscles of the larynx were in a semi-paralytic state, so must their due amount of nervous supply have been in some way or other impeded. It has been proved by the experiments of Dr. J. Reid, that the application of a stimulus to the superior laryngeal nerve merely produces the contraction of one muscle, the crico-thyroid; and that irritation of the inferior laryngeal nerve produces contractions of all the other muscles of the larynx,—facts which are in accordance with the ultimate distribution of these nerves. From a consideration of these circumstances, it was diagnosticated in the case which forms the subject of the present communication, that the recurrent laryngeal nerve was implicated by the progress of the aneurismal sac, and it was inferred that in this way the action of all the muscles of the larynx, except the crico-thyroid, was interfered with.

The occasional occurrence of paroxysms of suffocative dyspnœa was brought on sometimes by the effort to speak, and at others by the attempt to take nourishment more hurriedly than usual. That the dyspnœa was not caused by pressure upon the trachea and narrowing of its calibre, was evident, from the difficulty of breathing being paroxysmal, whereas if the cause had been permanent, the effect must have been equally constant. Here, again, the researches of Dr. J. Reid furnish a satisfactory explanation of the phenomenon in question. The following passage, extracted from Dr. Carpenter's Physiology, p. 140, will exhibit in a few words the results arrived at by Dr. Reid. "It has been ascertained by Dr. R. that if the inferior laryngeal branches be divided, or the trunk of the par vagum be cut above their origin from it, there is no constriction of the glottis, but a paralysed state of its muscles. After the first paroxysm occasioned by the operation, a period of quiescence and freedom of dyspnœa often supervenes, the respirations being performed with ease so long as the animal remains at rest; but an unusual respiratory movement, such as occurs at the commencement of a struggle, induces immediate symptoms of suffocation, the current of air carrying inwards the arytenoid cartilages, which are rendered passive by the paralysed state of their muscles; and these falling upon the opening of the glottis like valves, obstruct the entrance of air into the lungs." From these facts it might have been again inferred, that in the instance before us, the superior laryngeal or afferent nerve of the larynx was perfectly sound, and carried on its excitor functions with precision; and that the inferior laryngeal or efferent nerve was pressed upon by the aneurism, and in this manner had its anterior motor functions obstructed.

The bursting of the aneurism into the left pleura caused the immediate death of the patient. On a *post-mortem* examination it was found that the sac consisted of a dilatation of the arch of the aorta in its latter two-thirds, and chiefly along its convex border. The aneurismal tumor was very large, extending upwards and to the left side to within two inches of the left lobe of the thyroid body, and capable of containing about a pint and a half of blood. It was closely adherent to the trachea and œsophagus, without pressing on them at all. The condition of the inferior laryngeal nerve is thus described in the post-mortem case-book. "The left recurrent laryngeal nerve had, of course, to wind round the whole bulk of the aneurism, and in so doing was condensed, hard, red, inflamed, involved in the condensed tissue around the aneurism, and at its posterior part flattened out, its fibres separated, and apparently wholly disorganised." Such was the natural condition of the left motor nerve of the larynx, a state fully adequate to destroy the balance between the muscular movements of that organ, and to give rise to those remarkable symptoms which have been detailed above.

The insertion of this communication in your journal will greatly oblige

Your obedient servant,

F. G. Jackson.

30, Church Street, Spitalfields,
Dec. 8th, 1843.

CASES OF HYSTERIA.

To the Editor of the Medical Gazette.

Sir,

Although several years have elapsed since the following cases occurred, their interest is by no means diminished in consequence, and I think they merit a more prominent record than the pages

of my case-book are calculated to afford them, independent of the practical hint they convey.

It was on the 4th of August I was consulted by a respectable chain-cable manufacturer, who I found had been suffering from the first of the month from incessant hiccup. He was a thin, delicate man, of a sanguine temperament, and I found had sustained a severe pecuniary loss on the 1st of August, when, to use his own language, he felt a choking as if a ball was rising in his throat, and shortly afterwards the hiccup commenced, and which only ceased when from sheer exhaustion he dropped asleep, to be awoke shortly by a renewal of the hiccup. The complaint had continued now for the greater part of four days, without any amendment. It is unnecessary to detail the treatment, which proved wholly unavailing; suffice it to say, he took largely of the carbonate of magnesia, and also of valerian, camphor, and assafœtida. Opiates were also used without the slightest benefit, and the case went on until the 8th of August, on which day he remained in the same state, but his wife also had begun to hiccup, accompanied with globus hystericus, and on the day following his sister had also commenced, and the succeeding day, that is on the 10th, the maid-servant had got into the same state: it was a painful spectacle, although somewhat a ludicrous one, to see four individuals all at the same time hiccuping. It is the most extraordinary instance of imitative hysteria I ever witnessed, but what was worse, the remedies I have above enumerated had no effect in controlling the disease. However, on the 11th, something which the maid-servant took made her vomit, and from that moment the complaint ceased. I immediately ordered each of the others a mustard emetic, and was rejoiced to find that the sister also was cured after free vomiting: the wife did not so soon get rid of her attack, which, however, ceased for some time after the operation of the emetic, and she was now able to take her food, and a repetition of the emetic at the end of a few hours, and a warm stomachic with some of the carb.magnes., removed her complaint. Not so the husband, whose attack, however, was always suspended by vomiting, but soon returned. Now, however, he slept for considerably longer periods, and the complaint was suspended while he was eating: he was put upon a similar plan as his wife, only the emetic was used every evening. Under this treatment he got gradually well, but it was full three weeks before he was entirely rid of the hiccup.

I do not recollect having seen any similar instances recorded, although no doubt similar instances have occurred; it had the effect, however, of giving me a lesson in the treatment of hysteria, which I have never had cause to regret, having always found vomiting put a period to the attacks, and the moral effect upon the patient is equally satisfactory, as I believe the dread of an emetic has often had the effect of a check to a hysterical attack.

I am, sir,
Your obedient servant,
EDWARD GREENHOW, M.D.

North Shields, Dec. 9, 1843.

CONTRIBUTIONS TO ANATOMY AND PHYSIOLOGY.

By ROBERT KNOX, M.D. F.R.S.E.
Lecturer on Anatomy and Physiology, and Corresponding Member of the French Academy of Medicine.

The Corpus Luteum.

THE following very imperfect researches and inquiries were made shortly after the publication of my first memoir on the corpus luteum, four or five years ago. The more immediate cause of the delay in their publication was this. I had read, when first published, the work known by the name of "Sir Everard Home's Lectures on Comparative Anatomy," and at the period of my composing my first memoir on the corpus luteum I re-read the lecture having a reference to the subject of my memoir with every possible care, and with the deepest attention, being then aware that it contained, in all probability, the views of the "great master" himself, mingled up, no doubt, with much, both good and bad, from the pen of Sir Everard himself. My object was, if possible, to get at the *real opinions* of Hunter, as distinct from Home's theories and conjectures: this I fully anticipated being able to effect, because if it should turn out that Home's essay or lecture failed to furnish me with them, I might, during the

summer, inspect the Hunterian preparations themselves, and thus get a clue to the "theory" of the first of physiologists. In these expectations, however, I freely confess I have been disappointed; for, after having made, as I thought, a fair and impartial analysis of Sir E. Home's Lecture, my brother objected to the analysis, and offered me one of his own. That any thing was ever written in so inextricably confused a manner as this same lecture by Sir E. Home, I do most solemnly disbelieve; it exceeds in confusion anything I ever met with; nor am I at all singular in this opinion, for I have heard the same expressed by all anatomists I have conversed with. For this I account (if it be requisite to do so) by the peculiar circumstances under which the lecture was written; composed of the plunder of Mr. Hunter's manuscripts, which, without being understood, were then destroyed—of Mr. Clift's recollections; of an occasional glance at the preparations in the museum; of personal recollections of Mr. Hunter's conversations with himself; of a few very peculiar cases occurring in his own practice—out of these heterogeneous and, no doubt, discordant materials, did Sir Everard, adding thereto his own conjectures, concoct the "lecture" which has puzzled so many readers: and, during the concoction, keeping steadily in view his great object (a view persisted in by his followers in the Museum) of suffering to fall into abeyance, inasmuch as he could, the name of Hunter, by the substitution of his own.

Failing thus in making a satisfactory analysis of the "lecture," I next bethought me of Mr. Hunter's museum, in which I hoped to find these preparations so ticketed and marked as to enable me to guess at least with some show of probability at his real opinions. In this, however, I also failed, but from no want of courtesy or polite attention from those in charge of this altogether invaluable collection. I visited Mr. Hunter's museum in the summer season (June or July) of 1840, and examined the "division," having a reference to the "corpus luteum:" a MS. catalogue was kindly sent me by the conservators, but it had no reference to the preparations on the shelves; these had been originally put up, no doubt, expressly to corroborate Mr. H.'s views; but how were we to know to what they referred? Fifteen preparations examined in succession were wrongly marked in the MS. calalogue, and their value destroyed by their history being unknown.

In this dilemma I naturally waited for the coming out of the printed volume of "the catalogue," which I was assured would very shortly appear: it did so, and I have examined it with some care: to me, it does not seem to contain the whole of Mr. Hunter's views on generation, and scarcely any of those on the natural history of the corpus luteum.

Having now explained the delay which has taken place since the publication of my first memoir, I now beg leave to submit to the public the following observations in continuation of my first inquiries. The concluding part must be delayed until next summer.

Whilst occupied with these inquiries, the ovaria of a cow were sent me which the butcher assured me never had had a calf, but the statement rests upon his authority, and not mine, and therefore I do not wish the reader to consider it as an undoubted fact; but be this as it may, in one of these ovaria there is a large and most distinct corpus luteum, quite similar to those found in the ovaria when a calf is present in the uterus. In the other ovarium there is a second, somewhat smaller, and a third still smaller. Numerous vesicles of De Graaf are present and distinct.

It is not uncommon to find a miniature corpus luteum slightly adhering to the outer surface of a Graafian vesicle, but having no other connexion with it excepting with the capsules.

The bodies called false corpora lutea have, in the cow, precisely the same structure as the larger or true ones. I have satisfied myself of this fact repeatedly. In the ovaria, for example, of a cow in whose uterus was a calf of the size of a well-grown dog of about two months old, besides a large corpus luteum found in one ovarium, a smaller existed in the opposite ovarium differing in nothing from the first but in size.

We have only to examine a few ovaria in the sheep to be satisfied that there is nothing so inconstant as the mode in which the corpus luteum disappears after gestation and delivery,

occasionally continuing tolerably distinct for several months, whilst in other cases the same lapse of time causes its total disappearance. There is now before me the ovarium of a sheep, being precisely the contrast of the one alluded to above. This animal had a lamb in spring, and when slaughtered in autumn I find a still tolerably distinct corpus luteum, and with something even of an appearance of a central cavity.

Lastly, we do meet with the ovary of the cow in which neither true nor false corpora lutea appear.

I can ascribe the simplicity of Dr. W. Hunter's views respecting the nature of the corpus luteum, as compared to those of his brother, solely to his not having studied comparative anatomy so deeply, and to his having, therefore, viewed the question merely as an accoucheur. One or two references to Dr. W. Hunter's work on the gravid uterus will, I imagine, satisfy the reader as to this point.

In one of the engravings there is a view of the corpus luteum of a woman who died of flooding at the full period of pregnancy. In describing this drawing, and unquestionably the preparation from which it was taken, Dr. Hunter merely observes: "Here, in the substance of the ovary, the corpus luteum is seen split through the middle; no vessels appear at the centre, which is of a white complexion, but all around that centre its substance is very vascular."

In another plate the ovarium of a woman who died in the fifth month of gestation is represented. Now, on examining these two figures, there are clearly the remains of other corpora lutea, or, as I should rather say, miniature ones, of which Dr. Hunter has taken not the slightest notice. He seems never to have entertained the slightest doubts as to the history of what he calls "the *corpus luteum*," which he seems to have regarded as the product of conception. I am not, at the present moment, prepared to say what were his notions respecting these bodies we now call false corpora lutea; but his language, which I have quoted in describing the figures, clearly convinces me that he paid little attention to their presence. It seems to have been reserved for his brother (John Hunter) to bring again before the public those difficult questions which did not, however, originate with him, but had been, often discussed before by Santorini, Morgagni, and the observers of that epoch.

I have experienced very great difficulty in getting at what may be considered John Hunter's opinions respecting the structure and nature of the corpus luteum. I am not aware, for example, of his having published any separate memoir on the subject. His manuscripts were burned by his son-in-law, Sir E. Home, and the curators of his museum have hitherto refused to publish *a plain and simple account of the Hunterian preparations as they stood at the time of his death.* Had they presented to the public a brief and simple outline of those preparations of the ovaria which Mr. Hunter put into his museum with his own hands, I have little doubt that we should then have been able to have guessed pretty nearly at Mr. Hunter's views, but in the absence of such, there remains another mode of forming at least a conjecture as to Mr. Hunter's theories respecting the corpus luteum, viz. by examining the lecture on generation published by Sir E. Home in his Lectures on Comparative Anatomy (Vol. 3), and which Sir E. Home admits in his preface, and in his evidence before the Commissioners of Enquiry, to have been made up chiefly of extracts from the manuscripts he had destroyed, in addition to which evidence, if it required any confirmation, we have, if I mistake not, the further testimony of Mr. Clift, who assisted in copying these manuscripts, and preparing them for the press, under Sir E. Home's name.

I now proceed, therefore, to examine the substance of Sir Everard's lecture on generation. This I find the most difficult task I ever experienced, for anxious to conceal the fraud he was practising upon the public, he has mixed up almost in every page some crude notion of his own, rendering it nearly impossible to speak positively as to what Mr. Hunter's views really were.

I shall pass over, for the present, Sir Everard's story of the discovery of a very early ovum, examined by him along with Mr. Clift, and drawn by Baer, which has excited so much ridicule throughout Europe.

Mr. Hunter apparently believed the

corpus luteum to be a glandular structure, which forms the ovum or ovule, and when the ovum is expelled, gradually disappears, whether the ovum be the product of conception or not. He seemingly entertained the idea, that the formation of the corpus luteum containing the ovum was the cause, and not the effect, of impregnation, *i. e.* that the corpus luteum is first formed, that it next generates the ovum, and that then, and then only, impregnation may take place by the accidental presence of the male; but should this not happen, the ovum, or rather ovule, is discharged, but of course does not come to maturity. Mr. Hunter seems to have thought, moreover, that the source of the error into which medical men had fallen in respect to this important fact in physiology, lay in the circumstance of there being almost always in the ovarium of a woman dying in child-bed a corpus luteum preparing another ovum to be ready for future impregnation, and that this corpus luteum is usually mistaken for that belonging to the child in utero, or just born, whereas the former corpus luteum, that really belonging to the child then born, had entirely disappeared.

It is extremely probable that the latter part of this theory will prove untenable, but this does not disprove the first part, viz. that the corpus luteum begins first to form previous to all impregnation; that to discharge the ovule or ovum from the ovarium the preexistence or coexistence of a corpus luteum is essential, and that this may happen as well in the virgin as in the married woman, thus giving rise to these *miniature corpora lutea*, as I have ventured to call them, instead of *false*, since they are just as much true as that larger one always existing contemporaneously with a fœtus in the uterus. Indeed, the only difference I have been able to observe between a corpus luteum which has given origin, or at least discharged from the ovarium a fertile ovum, and that which has formed independently of impregnation, is the *comparative size*; the latter being, in the human female, perhaps always small, and often but imperfectly formed, the former being as uniformly fully developed.

But to return to what I must consider, for the reasons assigned above, as having been one of the views held by Mr. Hunter. I next endeavoured to make out from Sir E. Home's memoir (which, with the sanction of Mr. Clift, he calls "A Descriptive Catalogue of the Hunterian Preparations,") what preparations Mr. Hunter had actually left in his museum at his lamented death, illustrative of his views on "generation." But this I found an extremely difficult task, from the advisedly confused style in which they they have been mentioned by Sir Everard. They seem to me to have been as follows; but if in error, it will surely be an easy matter for any member of the London College to give a plain, simple, and intelligible description of "the preparations left by Mr. Hunter at his death illustrative of his peculiar views in respect to the corpus luteum."

1st. The ovarium of a woman 70 years of age: she had given birth to twelve children, and there exist distinct remains of numerous corpora lutea*.

2d. Specimens of the external organs of the human female, with the hymen entire, and in whom the ovaria shewed corpora lutea.

3d. There exist in Sir E. Home's paper some confused hints that Mr. Hunter verified the fact experimentally on the lower animals by locking up the female pig, and thus proving that corpora lutea might originate and become fully developed in the virgin animal; and it is also hinted that the preparations to prove this were deposited by Mr. Hunter in his museum. Were this fully and satisfactorily made out (which, however, is very far from being the case) then the question as to the nature of the corpora lutea is decided in the lower animals, but even then the analogy could scarcely be extended in all its latitude to the human female.

Since the publication of Mr. Hunter's descriptive catalogue by Sir E. Home, two very valuable contributions to this department of physiology have been given to the public by Dr. Montgomery and Dr. Lee. The points in which I venture to differ from these gentlemen have been already partly stated; I shall only, therefore, add, that I am fully

* Contradictive in terms to the previous remarks of Mr. Hunter, viz., that the corpus luteum entirely disappears in a few months after conception, or, at all events, delivery.

satisfied that the distinctive definition of a true and false corpus luteum in the human female by Dr. Montgomery will never hold its ground, and that as yet the results of the inquiry could not be employed safely by the medical jurist. The appearance of a cicatrix in the corpus luteum of a certain age, which Dr. Montgomery thinks the test of a true one, is, most assuredly, frequently wanting in specimens which are of unquestionable authenticity; nor is the cavity always present in the early corpus luteum. Thus, whilst it may be admitted, with Haller, that "conception never happens without the production (coexistence?) of a corpus luteum," the accuracy of the following opinion, which I quote on the authority of Dr. Montgomery, and which also belongs to Haller, may still be doubted—"the corpus luteum is never found in virgin animals, but is the effect of impregnation."

From these details I shall venture to draw the following conclusions:—There is no distinctive character by which the corpus luteum (true) can be distinguished from the miniature corpus luteum (false).

That the full-sized corpus luteum, always found coexisting with a fœtus *in utero*, seems to be the one from which the embryo of that fœtus came, and not that preparing a future embryo, as Mr. Hunter seems to have thought.

That there are no good grounds for supposing that corpora lutea do not form in virgin animals, and even in woman. But in the virgin human female they never seem to attain to any size, but remain diminutive.

That the question of the discharge of ovules from the ovarium by virgin animals is quite open for investigation. In no single species has the history of this phenomenon been made out. Thus, in some, as in the human female, the escape of the unimpregnated ovule from the ovarium may be capricious, irregular, or never even take place, whilst in the lower animals it may be periodical; but in one point it is highly probable that they all agree—that no ovule escapes from the ovarium impregnated, or not without the coexistence of a peculiar structure known by the name of corpus luteum.

That in respect to the central cavity of the corpus luteum, this may or may not be present, though observed precisely at the same period in different women. The same may be said of the central fold, which is often wanting in an undoubted corpus luteum.

The total disappearance of the corpus luteum presents the utmost variety, having a range, as I myself have observed, of from three months after delivery at full term, to an almost indefinite period.

Upon the whole, then, it would appear, with reference to the great question of virgin corpora lutea, that such bodies form altogether independently of impregnation, most assuredly in the lower animals, and in all probability even in woman, but that such corpora lutea never do attain the size of that one which coexists with, or follows, impregnation.

PUSTULAR OPHTHALMIA.

To the Editor of the Medical Gazette.

Sir,

It is six years since I requested, in consultation, a medical practitioner of this island to try the grey powder for pustular ophthalmia, as I found it, combined with bark, to remove the disease with scarcely any local treatment; since which time he and others have reported favourably of the remedy. They had neither used it, nor heard of its being used, with the same intention. I hope, in troubling you with these few lines, to hear, through the medium of your publication, a favourable report of what I have found to be a most useful remedy in a very obstinate disease; and if any person have previously published it, I am happy to corroborate its utility.

By referring to my paper on oiled silk, in the Medical Gazette of March 1841, you will find the above treatment recommended in scrofula; and also the green French oiled silk is substituted for the pasteboard shade in general use in ophthalmia. The only local treatment is a little extract of belladonna, with spermaceti ointment, applied to the lids, as I consider that eye-water or drops retard the cure. I sometimes begin with blood-letting (no leeches) where the pustule requires quicker action and when temporary relief from the intolerance of light is of importance, I direct a blister to the back of the

neck; but the chief reliance is to be placed in hydrarg. c. cretâ, its action quickened by quinine, and corrected by Dover's powder.

The first case in which I found the beneficial effect of the powder was a young lady about 17 years of age, of strumous constitution. She was on a visit in France, and the doctor who attended her having tried the usual remedies without improvement, became alarmed for her sight, and sent her home; in fact, when I saw her she was almost blind.

The second case was a little girl 4 years old, who came from England, having already undergone medical treatment. She was placed under the care of the oldest practitioner in this island, who, after some time, called in a celebrated French oculist; and from the state she was in when I saw her, I concluded that the ordinary treatment had failed.

The third case was the son of a general practitioner, 7 years old; had been a long time subject to a pustule on the cornea, and, from the great difficulty in making him take medicine, he had the hydrarg. c. cretâ only in the form of lozenges.

The following after-treatment, to prevent relapse, is often indicated: iodine and sarsaparilla, chalybeates, or quinine.—I am, sir,

Your obedient servant,

ALEX. LEIGH, A.B. M.B.
Late Royal Rifles.

Olympic Place, Jersey,
Nov. 13, 1843.

MEDICAL GAZETTE.

Friday, December 22, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

HOW TO KEEP ONESELF WARM.

THERE are two classes of persons, said Boerhaave, who suffer from cold—beggars and fools; the former not being able to procure a sufficiency of clothing, the latter not having sense enough to wear it.

Sir George Lefevre, in a pamphlet called "Thermal Comfort," has endeavoured to diminish the number of the latter class, and to show that life may be prolonged by warmer clothing and warmer rooms than it is customary to use in this country.

Dr. Thomas Young has observed, that the duration of a case of phthisis varies from six weeks to forty years; and Sir George attributes the prolongation of cases to twoscore years simply to warmth.

The consumptive, even when lying in bed, can detect variations in the temperature of their rooms, which are imperceptible to the healthy. Hence the great advantage which they derive from a residence in the equable climate of Madeira; and hence, too, the benefit which they experience when confined to rooms of unvarying temperature, without quitting their native country.

It is proved by the Bills of Mortality, that consumption carries off one-fifth of the population of the British Isles; and as the deaths from this disease are much fewer in more northern latitudes, Sir George ascribes the difference to the warmer clothing adopted in those icy regions. We should attribute it, in part, to the greater variableness of English weather. Moreover, a strong objection might be made to Sir George's deduction from the fact. As the whole mortality of northern climates is greater than in England, it would appear that the gain in phthisis is more than made up by the loss in other diseases; and it might be urged, that if stoves save the lungs, they attack the brain or the bowels, or whatever other channels the mortality of Russia selects. However, we will not be too syllogistical; we will take good where we find it, and will candidly confess that many of Sir George's suggestions would add to comfort, and some, probably, to health also.

It is a vulgar error, as he observes,

to suppose that the Laplander does not feel cold, or becomes accustomed to it. We recollect that Mr. Catlin refuted the same mistake touching the North American Indians. The truth is, that in climates where the thermometer at zero of Fahrenheit is a mere indication of seasonable weather, substantial clothing is the first necessary of life. There is no dallying with a cold that freezes brandy. Your Laplander or Kamschatkan braves the frost — in a suit of furs.

The Draconic law of nature in those countries says, "Wear furs, or die!" "Keep your cottage warm, or die!" The Russian peasant submits to the condition :—

"His door shuts close; his window-frames are double, two feet by three, the glass, or oiled paper, fixed in. In the corner of his room is a stove, whose chimney finds exit through the roof; no wide open place to allow of heat to ascend, and cause a continual draft of air. His hut is insupportable to those who are unaccustomed to such in-door temperature. The flies, congregated in some corner, hang down like a swarm of bees, happy and buzzing in *the winter season.* He himself lies prostrate on his stove, which serves him for a bedstead. This man is a rare subject for consumption."

The man in easy circumstances does the same thing, with a difference. If you go into his rooms, and observe upon its warmth, he answers with a Russian proverb, that heat breaks no bones. It would be a woeful offence to enter his parlour with your great coat on. In fact, it would be like insulting a jovial host by bringing a bottle of wine as your contribution to his table. The Russian shows his hospitality by his generous contribution of caloric, *ligna super foco largè reponens,* though he probably does not forget, at the proper moment, *depromere quadrimum merum diotâ.* The English resident in Petersburgh adopts the same precautions.

"Double doors protect the ante-room from the cold air of the staircase.* Upon entering, a sensation of hot-house heat is experienced, for this room is kept warmer than the other chambers. Once in the interior of the house, no perceptible difference is to be found in any of the rooms. Caloric has diffused itself equably through all of them. Whether it be in the dining, or in the drawing-room, or in the bed-chamber, or in the staircase by which you reach it, (when not upon the same flat) you move in the same eqnable temperature. Double windows, fitted close into immensely thick walls, exclude the external air. The rooms are warmed by stoves," &c.

It might be difficult to guage the precise wholesomeness of a hot-house temperature in one's dwelling; but it is easy to see that it must be eminently delightful, for a time, at least. Very pleasant did we find the German stove in our bed-room at Cologne, some six weeks ago. Nor did November allow us to find the smallest fault with the down bed above as well as below us, which has been the object of so much satire; in short, we were perfectly contented with what has been called "a spare bed on the Rhine."

Sir George Lefevre gives an amusing letter from an Englishman (himself?) spending a winter in his own country, to his friends in Russia, where he had lived for ten years. He finds that he does not want his furs, but complains grievously of the indoor cold. No stove in the ante-room! No double windows! The water is frozen in the jug in his bed-room, and he amuses himself in bed by trying to recognize the species of plants drawn by Jack Frost upon the window-glass. Every gust of wind makes the casements rattle; draughts come from the windows, draughts come from the door, and make the carpet dance up and down, if not fastened by

* How can the air of the staircase be cold? It is said, at the end of the quotation, to be of the same temperature as the dining-room, &c.; indeed, in the next page, we are told that the staircases are heated by stoves.

nails; and the unhappy Anglo-Russ even asserts that "if the rain pelts against the windows, it penetrates through the sashes, and runs down upon the window-seat." He bemoans his hard fate, and fears that poor Amelia, whose cough is getting worse, will fairly sink under these accumulated ills.

The letter is a clever drawing after nature. Yet, windows that admit the rain, and dancing carpets, are rarely to be found except in the houses of the negligent; but stoves and double windows are scarce everywhere, and frozen jugs very common.

The reason is plain enough. Although a fire is a pleasant thing in England for eight months in the year, intense cold is seldom or never of long duration. Hence it is thought unnecessary to use stoves, or keep up a hot-house temperature in our dwellings. The makers of thermometers tell us on their scales what heat is necessary for melons and pine-apples, but they have forgotten to inform us which is the best temperature for complexions. We rather conjecture, however, from what Sir George says, that rosy cheeks are more common in England than in Russia. The consumptive may prolong their lives by a stove-heated range of apartments; but ordinary lungs, well protected by blankets, will not be injured by the air of a bed-room at 40°, though Jack Frost should paint whole galleries on the panes.

We must loudly protest, too, against Sir George's recommendation of nailing down windows to prevent their rattling in the chamber of an invalid. We should prefer the insertion of a piece of wood between the sash and the frame, which can be taken out when the window is to be opened. Neither Russia nor England is perfect in these points. "'Your rooms have a close, musty, sickly smell,' says the English traveller in St. Petersburg. 'On est toujours dans un air coulant,' said a lady to me who had passed two years in London and Edinburgh."

Our Anglo-Russian physician, however, thinks that a *juste milieu* might be hit upon. He offers to give up stoves, on condition that we abolish rattling casements, draughts under the doors, and dancing carpets. Done.

Moreover, "in cold weather, fires should be kept up day and night." Most willingly; if Sir George will give us an easy fortune, or make coals cheap in the metropolitan district. In many parts of England this recommendation is acted on. In Wolverhampton, for instance, where the best coals are about six shillings a ton, it would be foolish to let the fire go out.

And now one word about clothes. The same cause which has prevented the adoption of stoves, namely, the general mildness of our winters, has, with less reason, induced a multitude of persons to dress with too little regard to the long-extended chilliness, and occasional coldness, of our weather. Every year we have ten or a dozen days, when a suit of furs would be agreeable, but few can afford an expensive vestment to be used so seldom. Granted; but our gymnosophists go much farther than this; for as they find that the cold is rarely intense, they confound the possible with the expedient, and brave the frosts of January in their autumnal garments. Indeed, it seems to be considered a mark of manhood to use a minimum of wool; and not only the young man of five-and-twenty, but the grave professor, at a much later epoch, may be seen indulging in this unnecessary martyrdom.

Sir George recommends outer coverings, in their several gradations, to suit the varieties of weather, from the unpicturesque Taglioni to the sober great-coat; and a large silk handkerchief to

tie round the neck at night; for he says that in this essay he chiefly advocates "the Hibernian method of treating complaints, viz. the preventive one."

But this must be enough, for the present *de re vestiariâ.**

ELECTION AT ST. GEORGE'S HOSPITAL.

The election of an assistant-surgeon, to which we alluded in our number for December 1, terminated on the 15th, in the defeat of the medical officers and the candidate whom they supported. This result is an event of some moment, as it breaks the chain of success (we believe invariable) which has hitherto attended their protegé. The numbers were—

For Mr. Johnson . . .	169
For Mr. Hawkins . .	152
Giving a majority of .	17

The circumstances were altogether rather peculiar, and appear to have placed the hospital staff on the horns of a dilemma. Mr. Tatum, and Mr. Henry James Johnson, the two gentlemen last elected, were both teachers in Kinnerton Street; and to have supported a third candidate from the same quarter, would have had the appearance of intending to make the lectureship in the anatomical school alluded to a passport to the hospital, which certainly was to be avoided. But this would have been equally accomplished by their remaining neuter, which the result has shewn would have been their most eligible course. Had they supported Mr. Johnson, it is extremely probable that considerable jealousy would have been excited; but no sooner did they declare against him than a reaction took place; and we are not sure that he did not, in this indirect way, rather gain than lose by their opposition.

Mr. Johnson, who had very high testimonials from Sir Benjamin Brodie and Dr. Chambers, is unquestionably perfectly qualified to fill the office to which he has been elected; and to satisfy all parties, we believe, it only remains that he assiduously exert himself in the discharge of his important duties.

WESTMINSTER HOSPITAL.

On Tuesday the 12th, B. Phillips, Esq. was elected assistant-surgeon to the Westminster Hospital.

RELIEF OF THE POOR.

To the Editor of the Medical Gazette.

Sir,

Lord Ashley has written to remind me of his intention to bring the subject of medical relief to the poor before Parliament at the commencement of the ensuing session, and I beg your permission to remind the members of the medical profession, through your journal, that his success in obtaining a committee must depend upon the number and accuracy of the facts he may be able to bring forward in proof of the necessity for a full and fair inquiry into the subject. I am greatly obliged to those gentlemen who have been so good as to communicate with me during the last twelve months, and will beg of them to write between the 10th and 20th of January, if any change should have taken place in the facts and circumstances they then made me acquainted with.

I need hardly repeat to the members of the profession, that this will be in all probability the last opportunity they will have of redressing their own grievances, and those of the unfortunate poor committed to their charge.

I shall be happy to present any of those who are particularly interested in this subject to Lord Ashley, and to give them every opportunity of explaining to him their own views. He has no predilections, and is only desirous of doing that which it may be

* Sir George Lefevre asserts that it was one of the "quaint sayings" of Sydenham, that in the treatment of phthisis his physician was a horse and his apothecary an ass. Not so: the maxim belongs to Guy Patin. See Medical Gazette, April 21, 1838, p. 152.

just and right to do for the poor, and for their medical attendants.

It is exceedingly desirable that all who have influence with members of Parliament, should lose no time in interesting them to the utmost of their ability in supporting and promoting Lord Ashley's inquiry.—I am, sir,

Your obedient servant,

G. J. Guthrie.

4, Berkeley Street,
Dec. 16, 1843.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

December 12, 1843.

The President in the Chair.

Case of alarming Syncope from the Admission of Air into a Vein during an Amputation at the Shoulder-joint. By Bransby B. Cooper, Esq. F.R.S. Surgeon to Guy's Hospital.

The patient, a female, nineteen years of age, was admitted on the 17th of May, 1843, under the care of the author, for enlargement of the middle third of the humerus. She had suffered pain in the seat of the disease for eight months, but the swelling did not commence till six weeks before her admission into the hospital. From the history and the examination of the arm, the tumor was considered to be a malignant disease of the bone, and amputation at the shoulder-joint was resolved upon. This operation was performed on the 23d of May. The arm was removed in less than a minute, and with very little loss of blood. When the limb had been severed from the body, the patient, who had borne the operation with great fortitude, expressed her thankfulness in a firm and audible voice. The subclavian artery was immediately secured, but its compression still retained upon the first rib, as there were small vessels requiring ligature. The author then proceeded to remove a gland, which was somewhat enlarged, from the axilla; and while dissecting it from its cellular attachments, he distinctly heard a peculiar gurgling noise, like air escaping with fluid from a narrow-necked bottle; and at the same instant the patient fell into a state of collapse, threatening immediate dissolution: the countenance was deadly pale; pupils fixed, and unobedient to light; the pulse quick, small, and fluttering, although at intervals regular; the respiration was irregular, being hurried and feeble, and attended occasionally with a deep sigh. The patient was directly placed in the horizontal posture, the flap brought over the wound, and retained by plaister; and various stimulants were administered. An hour elapsed before she was sufficiently recovered to be removed from the operating theatre. Upon being placed in bed, she passed her fæces and urine involuntarily. When the reaction was coming on, she uttered a continued whining cry, and maintained a constant motion of alternate flexion and extension of the right leg, while the left remained perfectly quiescent, and seemed insensible to feeling, as well as motionless. She complained also of pain running up the right side of the head and neck. For several days she remained with her eyes closed. The lower extremities in the same condition as described, and the pulse very frequent. It was found necessary to give her opiates at different times, which relieved her general restlessness, and procured sleep. On the fourth day, the left leg was also affected with involuntary contractions; but these subsided on the following day. On the 25th day she was able to leave her bed. The motions of the right leg had ceased at this time, but she complained of great numbness and loss of power in the left leg. On the 3d of July she was sufficiently recovered to leave the hospital, having no other unfavourable symptom but a slight dragging of the left leg. The author concluded his paper by adding remarks on the consequences of air being admitted into the veins, and pointed out the resemblance between the symptoms in his case and those presented in other similar cases upon record, as well as in experiments upon the lower animals, made to elucidate the subject. He drew attention to the different effect produced in man compared with brutes by the admission of air, owing to the influence of mental agitation on the motions of the heart in the former. He also dwelt on the various modes of death in such cases, according as the air introduced distended and paralysed the walls of the right cavities of the heart, or was sent onwards, mixed with the blood, to the lungs, or was transmitted by the arteries to the brain; and he ended by offering some practical remarks on the best mode of guarding patients from such dangerous occurrences in operations about the neck and shoulder.

The next meeting of the Society will be held on Tuesday, the 9th of January, 1844.

CHRONOLOGICAL SCHEDULE OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

We subjoin a list of the Fellows of the College of Surgeons, which has just appeared:—

John Goldwyer Andrews, St. Helen's Place.
Sir Benjamin Collins Brodie, Bt. Saville Row.
Samuel Cooper, Woburn Place, Russell Sq.
Honoratus Leigh Thomas, Leicester Place.
Robert Keate, Albermarle Street.
John Painter Vincent, Lincoln's-inn-Fields.

George James Guthrie, Berkeley Street.
Anthony White, Parliament Street.
Thomas Copeland, Cavendish Square.
James Briggs, Edgeware Road.
William Lawrence, Whitehall Place.
Benjamin Travers, Bruton Street,
Joseph Swan, Tavistock Square.
Edward Stanley, Brook St. Grosvenor Sq.
Joseph Henry Green, Hadley, Middlesex.
Thomas Callaway, Wellington St. Southwark.
George Gisborne Babington, Golden Sq.
Robert Liston, Clifford Street.
James Moncrieff Arnott, New Burlington St.
John Flint South, Blackheath Park, Blackheath.
John Morgan, Finsbury Square.
Robert Rainy Pennington, Portman Square.
Alexander Ogilvy, Montague Square.
Richard H. H. Steel, Berkhampstead.
Thomas Nixon, Pepperwick, Notts.
James Borland, Teddington.
Sir Simon Heward, Knt. Carlisle.
John Gunning, Paris.
William Hey, Sen. Leeds.
Robert Bloxham, Isle of Wight.
Richard Cartwright, Bloomsbury Square.
Thomas Beckett, Russell Place.
Stephen Woolrich, Bridgnorth.
James Annesley, Albany.
George Frederick Albert, Cheltenham.
Henry Parkin, Marine Barracks, Woolwich.
Thomas Kidd, A., Corfu.
Joseph Constantine Carpue, Charlotte St. Fitzroy Square.
Sir James Pitcairn, Knt. A., Cork.
Henry Coates, Salisbury.
Sir Stephen Love Hammick, Bt., Cavendish Square.
George William Young, Mortimer Street.
Joseph Langstaff, Cambridge Square.
John Smith Soden, Bath.
Charles Seager, Clifton.
William Henchman Crowfoot, Beccles, Suffolk.
William Percival, Sen., Northampton.
George Norman, Bath.
Samuel Dyer, Cambridge Ter., Hyde-Park.
John Bacot, Portugal St., Grosvenor Sq.
Richard Wood, Birmingham.
John Harris, Exeter.
John Badley, Dudley.
Bowyer Vaux, Birmingham.
Sir John Chapman, Knt., Windsor.
William Attree, Brighton.
George Gunning Campbell, Montague Sq.
George Langstaff, New Basinghall Street.
Samuel Ludlow, Exeter.
Jonathan Toogood, Bridgewater.
Sir Augustus West, Knt., Paris.
Morgan Thomas, Woolwich.
Thomas Davis, Brook St. Hanover Sq.
William Andrews, Salisbury.
James Dawson, Liverpool.
John Ridout, Montague Street.
John Augustus Knipe, United Service Club.
Vero Clarke Kemball, Oriental Club.
John Wright, Derby.
Hugh Chudleigh Standert, Taunton.
Charles Farrell, Dalyston, Loughrea.
John Atkinson Ransome, Manchester.
Robert Bickersteth, Liverpool.
Charles Boutflower, Liverpool.
Kenrick Watson, Stourport.
John Bishop Estlin, Bristol.
George Champney, York.
James Ainsworth, Manchester.
Andrew Brown, Paris.
Richard Bennett Godwin, Derby.
Harry Blaker, Brighton.
William Tuckwell, Oxford.
William Bewicke Lynn, Sloane Street.
John Grenfell Moyle, Charlton Kings, Cheltenham.
William Goodlad, Manchester.
James Pook Sheppard, Worcester.
John North, Gloucester Place.
Robert Thorpe, Manchester.
Charles Wingfield, Oxford.
John Lawrence, Brighton.
Thomas Martin, Reigate.
Richard Willson Brown, Bath.
Richard Blagden, Albemarle Street.
Charles Mayo, Winchester.
Gideon Algernon Mantell, Clapham Comm.
Samuel Barnes, Exeter.
William Cother, Gloucester.
John Haddy James, Exeter.
John Nedham, Leicester.
Matthew Pierpoint, Worcester.
William Rae, Melville Hospital, Chatham.
Joseph Hodgson, Birmingham.
Samuel Smith, Leeds.
Henry Terry, Northampton.
Alfred Jukes, Birmingham.
John Clarke, Speddock, near Dumfries.
John Cooper, Liverpool.
William Lloyd Thomas, Hatfield.
Charles Henry Phillips, Cleveland Row, St. James's.
John Baird, Newcastle-upon-Tyne.
Thomas Joseph Pettigrew, Saville Row.
William Jackson, Sheffield.
Robert Tayler, Brighton.
John Green Crosse, Norwich.
William James Wilson, Manchester.
William Cleoburey, Oxford.
William Hunter, Surgeon-Major, Guards.
John Okes, Cambridge.
James Wardrop, Charles Street, St. James's.
Montague Gosset, Broad Street Buildings.
Thos. Michæl Greenhow, Newcastle-on-Tyne.
Sir John Fife, Knt, Newcastle-on-Tyne.
James Ranald Martin, Grosvenor Street.
William Wright, Nottingham.
William Kingdon, New Bank Buildings.
William Couborough Watt, Royal Naval Hospital, Malta.
Robert Harrison, Dublin.
James William Braine, Cleveland Row.
George Beauchamp Knowles, Birmingham.

Robert Armstrong, Plymouth Hospital.
Thomas Turner, Manchester.
John Boutflower, Manchester.
Henry Giles Lyford, Winchester.
William John Wickham, Winchester.
John William Wilton, Gloucester.
Joseph Prince Garlick, Leeds.
John Mawdsley, Hanover Square.
Edward Tegart, Bryanston Street.
Sir John Webb, Knt. Woolwich.
Sir Jacob Adolphus, Knt. Cheltenham.
John Yerrow Arrowsmith, Shrewsbury.
Eusebius Arthur Lloyd, Bedford Row.
Daniel Henry Walne, Guildford Street.
Henry Edward Burd, Shrewsbury.
Thomas Arthur Stone, Clifford Street.
William Hey, jun., Leeds.
Richard Hughes, Stafford.
John Masfen, Stafford.
William MacKenzie, Glasgow.
Andrew White, Hertford Street, May Fair.
George Macilwain, Argyll Place.
Thomas Paget, Leicester.
John Hopps, York.
George Buckley Bolton, Pall Mall.
Robert Craven, Hull.
Robert Ceeley, Aylesbury.
Herbert Mayo, Boppart.
Philip Chilwell De la Garde, Exeter.
Francis Peter Ballard Samwell, Margaret Street, Cavendish Square.
George Sampson, Chester Street.
Robert Wade, Dean Street, Soho.
John Prince Halton, Liverpool.
Richard Welbank, Chancery Lane.
John Scott, New Broad Street.
Edward Cutler, New Burlington Street.
William MacKenzie, Edinburgh.
Isaac Hurst, Bedford.
Charles Aston Key, St. Helen's Place.
John Whitaker Johnson, Derby.
Douglas Fox, Derby.
James Syme, Edinburgh.
Richard Thomas Gore, Bath.
Cæsar Henry Hawkins, Half-Moon Street.
Richard Duguid Grainger, Annerley, Norwd.
Fred. J. R. Hale Thomson, Berners Street.
James Luke, Broad Street Buildings.
John Maurice Banner, Liverpool.
Thomas Pridgin Teale, Leeds.
William Eccles, Old Broad Street.
Benjamin Henry Norgate, Norwich.
William Francis Morgan, Bristol.
Frederick Huntington, Hull.
Price Blackwood Hallowes, Canterbury.
David Browning Major, Canterbury.
John Colley Taunton, Hatton Garden.
Rich. Anthony Stafford, Old Burlington St.
Bransby Blake Cooper, New St. Spring Gard.
William Sands Cox, Birmingham.
Thomas Wormald, Bedford Row.
George Pilcher, Great George St. Westm.
John Bishop, Bernard Street.
John Geo. Perry, Gt. James St. Bedford Row.
George Simpson, Bedford St. Bedford Sq.
Gilbert Wakefield Mackmurdo, N. Broad St.
Francis Kiernan, Beaumont St. Marylebone.
Henry Heath, Newcastle-on-Tyne.
Henry Russell, York.
John Harrison, Bristol.
Thomas Green, Bristol.
Richard Hey, York.
John Malyn, James's Street, Westminster.
George Gulliver, Royal Horse Guards, Blue.
Edw. Wm. Tuson, Russell Place, Fitzroy Sq.
Henry Clarke, Bristol.
Richard Owen, College of Surgeons.
John Willimott.
Wm. Coulson, Frederick Place, Old Jewry.
Joseph Jordan, Manchester.
Wilson Overend, Sheffield.
John Dalrymple, Grosvenor Street.
Samuel Gregory, Sheffield.
Richard Middlemore, Birmingham.
Richard Partridge, New St., Spring Gardens.
John Hilton, St. Thomas's Street, East.
William Henry Bainbrigge, Liverpool.
Richard Quain, Keppel Street, Russell Sq.
George Mills White, Nottingham.
Thomas Cox Buchanan, Gloucester.
Henry Thomas Chapman, Lower Seymour St.
Edward Cock, St. Thomas's St. Southwark.
Henry Denne, Canterbury.
Sam. Wm. Langston Parker, Birmingham.
Samuel Solly, St. Helen's Place.
Thomas Tatum, George St. Hanover Sq.
Alexander Shaw, Henrietta St., Cavendish Sq.
John Adams, New Broad Street.
Alfred Hamilton, Broad Street Buildings.
George T. Morgan, Cleveland St. Fitzroy Sq.
Henry Douglas Carden, Worcester.
Samuel Armstrong Lane, Grosvenor Place.
John Avery, Saville Row.
Frederick Dover, Great Coram St. Russell Square.
John Hobbs, Southampton Row.
James Farish, Lancaster Place, Strand.
John Dickin, Shrewsbury.
William Pennington, Montague Place.
Henry Clinton Attenburrow, Nottingham.
Dickenson Webster Crompton, Birmingham.
Andrew Melville McWhinnie, Crescent, New Bridge Street.
Edward Wallis, Hull.
Alfred Joshua Wood, Gloucester.
Benjamin Phillips, Wimpole Street.
Henry Cooper, Hull.
George Roberts Tatum, Salisbury.
Charles Beevor, Berners Street.
Henry Jackson, Sheffield.
George Busk, Dreadnought Hospital Ship.
Thomas Wilkinson King, Bedford Square.
John Godwin Johnson, Norwich.
Henry Thomas, Sheffield.
Henry Stubbs, Liverpool.
Charles Lestourgeon, Cambridge.
William Gill, Liverpool.
Rutherford Alcock, Bolton Street.
Benj. Travers, jun., St. Thomas's Hospital.
Nathaniel Smith, Bristol.

Wm. James Erasmus Wilson, Upper Charlotte St. Fitzroy Sq.
Thomas Nunneley, Leeds.
Robert Hughes, Stafford.
William Henry Fletcher, Gloucester.
John Harrison, Charles Street, Berkeley Sq.
James Long, Liverpool.
Thomas Blizard Curling, New Broad Street.
Frederick Le Gros Clark, Finsbury Square.
Carsten Holthouse, Serle Street.
John Farrar Crookes, Suffolk Pl. Pall Mall.
Archibald Dalrymple, Norwich.
Edward Francis Lonsdale, Guildford Street.
Henry Charles Johnson, Saville Row.
Henry James Johnson, Suffolk Place, Trafalgar Sq.
Cornelius Harrison Browne, Canterbury.
Chas. Hy. Rogers Harrison, Southampton St., Fitzroy Sq.
Philip Bennett Lucas, Manchester Street.
Dennis Embleton, Newcastle-on-Tyne.
Henry Hancock, Harley Street.
John Gay, Pavement, Finsbury.
John Newton Tomkins, Russell Place, Fitzroy Sq.
Samuel Holmden Amphlett, Birmingham.
Charles Lewes Parker, Oxford.
Alexander Ure, Charlotte St. Bedford Sq.
George Lewis Cooper, Keppel Street.
William Morrison, New Castle-on-Tyne.
George Newport, Somers St. Oxford Terr.
George Viner Ellis, George St. Hampstead Road.
James Duncan, Edinburgh.
Thomas Morton, Woburn Pl. Russell Sq.
Ewd. John Chance, Newcastle St. Strand.
Campbell Grieg De Morgan, Manchester St.
John Chippendale, Great Queen Street.
James Dixon, Broad Street Buildings.
James Paget, St. Bartholomew's Hospital.
Josiah Hammond, Cambridge.
Prescott Gardner Hewett, Vigo Street.
Francis Hird, Cleveland Row, St. James's.
Richard William Tamplin, Great Queen St.
Charles Hawkins, Court Yard, Albany.
William Trew, Woburn Place, Russell Sq.
Henry Smith, Henrietta St. Cavendish Sq.

CASE OF

EPILEPSY, INDUCED BY A BLOW UPON THE HEAD,

SUCCESSFULLY TREATED.

By Isaac Parrish, M.D.

Read before the Philadelphia Pathological Society.

H. T——, the subject of the present note, is a young man, of about 20 years of age, tall and of slim stature, and of strumous constitution, having been at one time affected with necrosis of the tibia, from which he had recovered, with the loss of several portions of bone.

While engaged in his occupation, as clerk of a store, he had occasion to get upon a high counter, and in suddenly rising upon his feet, from a stooping position, struck his head with violence against the end of a gas-pipe, which projected from the ceiling. The blow was received upon the top of the head, two or three inches to the left of the sagittal suture.

He fell back in a state of insensibility, and, in a few moments, passed into a convulsion. A physician was immediately sent for, but when he arrived consciousness was returning; and nothing was prescribed in the way of medicine; the patient was cautioned, however, against undue exertion, &c. After the fit, severe headache continued, but the patient considered himself well enough to walk home, a distance of several squares.

On reaching the door of his chamber, in the third story, he uttered a loud scream, and fell prostrate on the floor in a violent convulsion. I was with him in a few minutes, while the attack was still upon him, and have seldom witnessed a more severe fit. The face was deeply flushed, head hot, eyes injected, pulse tense, with frothing at the mouth, and general muscular disturbance.

Ice water was freely poured over the head, and sinapisms were applied to the feet, and in a few minutes the attack subsided.

A large number of leeches were now applied to the temples, and the sinapisms were continued to different parts of the extremities, until the stupor following the convulsion had entirely passed away.

As consciousness returned, the pain in the head was still the subject of complaint; this, however, was greatly relieved by the leeching; the patient became calm and rational, and detailed with precision the particulars of the accident.

In about an hour, however, he broke out into incoherent conversation, screaming and laughing by turns, with hot head and flushed face; this quickly passed over under the use of cold applications, and he sank into a quiet, natural sleep. During this visit, the point of injury was carefully examined by shaving the head over the part, but nothing but a slight contusion could be discovered; the bone not appearing to be injured.

The accident occurred Seventh mo. (July) 31st, 1839, in the afternoon. During the night the patient slept calmly, but on the following day he had several attacks of severe headache, coming on suddenly, and attended with screaming, laughing, &c. as above described. During several of these, he was insensible for a few minutes; but was generally easy and tranquil in the intervals between them.

He took several doses of a decoction of senna and Sulph. Magnes. during the day,

which purged him freely; the cold applications were continued to the head, and he was kept upon a low diet.

On the following day, eighth mo. (August) 2d, the attacks were less frequent and severe, and in two or three days they subsided altogether. The patient was carefully excluded from all causes of excitement, being kept quiet in his chamber, and restricted in his diet, until all headache and uneasiness had entirely left him, when he was allowed to go abroad cautiously, without, however, engaging in any business, and being restrained as far as possible from everything which might excite his nervous system.

For a period of eight months the patient escaped a renewal of the disease; and it was hoped that he had entirely recovered from the predisposition. He suffered, however, from another attack in the fourth mo. (April,) 1840. It came on during the exercise of singing at a place of worship; and, from what I could learn, resembled very much those which had preceded it. From this time the susceptibility to the disease increased, and the attacks recurred at shorter intervals. Any sudden fright was apt to induce it; on several occasions the noise of the firemen and the ringing of the bells brought on a paroxysm. The patient was sent to the country with a view of improving his general health, and of separating him from those causes which seemed to excite his malady.

He remained out of town several weeks, during which time he was clear of the convulsion; on his return, however, they recurred, and were so frequent and distressing as to cause his friends great anxiety, and to render it unsafe for him to go abroad alone.

It was now remarked, by those who witnessed these attacks, that they were immediately preceded by a shoot of pain in that portion of the head which had been the seat of injury; the patient would seize his hair over this spot, and pull it forcibly, as if in agony, and then pass into a convulsion.

No pain in the head was complained of at any other time, nor did the patient seem aware that any connection existed between these attacks and the blow he had received. On close examination of the injured part, however, it was very evident that there was a sensitive point, although nothing externally indicated it. Pressure upon a spot about the size of a quarter of a dollar piece, a little to the left of the sagittal suture, caused severe pain and general nervous agitation, and indicated with sufficient clearness the close connection between the convulsions and the injury which this part had sustained. This was evidently the point from which the *aura* arose, and at once assumed an important place in the subsequent treatment of the case.

A consultation was now requested, and that excellent and experienced surgeon, Dr. Thomas T. Hewson, joined me. After a careful review of the history of the case, it was determined to address our remedies chiefly to the original seat of injury; it was believed that the acute pain on pressure, and the evident suffering prior to a paroxysm, felt at this spot, furnished sufficient indications for such a course.

Eighth mo. (Aug.) 1st, 1840—just one year after the reception of the injury—assisted by Dr. Hewson, I made an incision about two inches long, directly through the tender portion of the scalp, and down to the bone. Several issue peas were inserted between the edges of the wound, and secured in their places by plaster. In a few days purulent discharge took place, and a constant drain was thereby established from this irritated surface. A course of constitutional treatment, with tonics, salt bath, &c. was at the same time instituted, and we had the gratification of witnessing a rapid amendment in our patient; no return of pain or convulsions occurred, and his general health improved.

About a month after the incision into the scalp, the patient was attacked with severe periostitis in the limb which had previously been the subject of necrosis. Leeching, anodyne plasters, &c. relieved this affection in a degree.

At the end of seven weeks, the soreness in the scalp having entirely disappeared, it was deemed safe to remove the peas, and heal up the issue. A seton was passed over the tibia, which continued painful at times; this was kept discharging for several months, until all pain in this part had disappeared.

Our attendance upon the patient now ceased, although we did not consider him safe from a recurrence of the convulsions. He has, however, escaped entirely up to this time—a period of between two and three years—thus giving us the opportunity of reporting his case as cured. When we consider the frequency of the attacks prior to the issue in the scalp, and the entire immunity from them since that time, notwithstanding the constant exposure of the patient to those causes which formerly induced them, we must regard this procedure as a highly interesting and important curative measure—at least in the present instance.

Remarks.—The great obscurity in which the pathology of epilepsy is involved, and the inefficiency of all known medical means in its treatment, at least in the large proportion of cases, renders the report of every case in which remedies have proved availing a matter of some importance.

The case now presented offers an interesting example of that form of epilepsy termed by the old writers *sympathetic*, in which the brain appears to be involved secondarily—

the paroxysm taking its rise from a point *without* the cranium. This variety has always been considered more manageable than that which has its origin in some hidden cause *within* the brain, whether induced by hereditary predisposition, or from a constitutional vice of any kind. Hence Hippocrates has sagaciously remarked that those epileptics are very hard to be cured "in whom the disease affords no sign from what part of the body it takes its origin;" and Celsus has said with equal propriety—"that if the whole body is affected at once, and no sense of the approaching fit is felt in any particular part, but the person falls down unexpectedly, of whatever age he is, he can hardly be cured." Many similar expressions might be quoted from ancient authors, tending to show the importance which they attached to this distinction between idiopathic and sympathetic epilepsy—a distinction which appears to have been too much overlooked by modern practitioners, except in cases where it is so obvious as to force itself upon our attention, as in fits occurring in infants from dentition, from indigestible matters in the alimentary canal, &c. Points of local irritation upon the surface of the body may be as influential in inducing an epileptic paroxysm as internal causes, and, by removing them, we may be equally successful in putting a period to the disease.

Hence the importance of close inquiry into the history of each case, and if a centre or point be discovered from which the aura epileptica takes its origin, our remedies may be directed to it with a hope of success. The application of blisters, issues, and even of the cautery, to such diseased parts, are strongly recommended by the old authors, and many cases are reported in which they have been successful.

In some instances the occurrence of a spontaneous discharge of matter from the head, the appearance of an eruption, or an accidental wound of the scalp, have accomplished a cure. Thus we find in Van Swieten's Commentaries, the case of a French nobleman related who, being troubled with an epilepsy, took a journey into Italy, in order to consult the most skilful physicians there; but being plundered by robbers upon the road, and very much wounded, he was left for dead: besides other wounds, he had received a very large one in his forehead, which carried off a great part of the bone. After a long time, he was cured of this wound; and, at the same time, was freed of the epilepsy, which used to return upon him every month*."

The use of the trepan, in certain cases of epilepsy following injuries of the head, was also recommended by the ancients—especially when the symptoms indicated disease of the bone, or the extravasation of humors under the skull, or pressure on the brain from a depressed fragment. This operation has been revived in this country by Dr. Dudley, of Lexington, who has reported several very interesting cases of cure after its performance. Dr. D. very judiciously restricts the resort to so serious a measure to those cases only in which there is an evident depression of bone, or a morbid condition of it, produced by violence or other causes, leaving thereby but little doubt as to the point to which the instrument should be applied, and of the practicability of removing the cause upon which the cerebral excitement depends.

Dr. Dudley also believes that chronic inflammation of the pericranium is not an unfrequent result of contused wounds of the scalp, which have been healed too rapidly by the first intention; and that many unpleasant and alarming symptoms are the consequence of this practice*."

The case now narrated would seem to favour the idea that chronic inflammation of the pericranium may even induce epilepsy, and that the establishment of a drain over the diseased surface affords the best means of relief.

Nor is it irrational to suppose that the same practice might answer even in cases where the bone itself is diseased, without a resort to the trephine, provided the internal table were not involved in the mischief, and no pressure existed upon the brain.

Painful affections of particular nerves, coming on in paroxysms, and arising from disease in the trunk of the nerve, whether induced by injury or from other causes, are sometimes the cause of convulsions, which, if not arrested, may become habitual. Under these circumstanaes, division of the diseased trunk is obviously indicated, and has been long practised. A very curious case of this kind is related in the learned Commentaries just quoted. "A woman, of thirty-eight years of age, had been twelve years subject to the epilepsy: in the beginning of the disease she had a paroxysm every month; afterwards it so increased that she suffered four or five strong fits every day, each of which lasted for an hour and upwards; whence, being rendered quite dull and stupid, she was no longer able to take care of her family. All kinds of remedies were used without the least success, the disease still growing worse.

In the meantime, the paroxysm always began in the leg, about the lower part of the gastrocnemii muscles; immediately it flew up to her head; and then she fell down violently convulsed, and foaming at the mouth.

* Van Swieten's Commentaries, vol. x. p. 425.

* Transylvania Journal of Medicine, vol. i.

A physician, who was present during the time of paroxysm, compared the leg affected with the other, and he could not distinguish any difference between them: however, he boldly thrust in a scalpel to the depth of about two inches, and in the bottom of the wound he found a hard, cartilaginous body, somewhat larger than a pea; he separated it from the muscles, and found that it rested upon a nerve: cutting the nerve, he laid hold of that heterogeneous body, and he pulled it out; this was no sooner done but immediately the patient recovered out of the fit, saying that she was very well, and afterwards lived quite free of this terrible disease. and recovered her former vigour both of mind and body*."

The facts thus hastily thrown together sufficiently prove the position that a small point of local irritation, which might readily escape notice, may prove the source of this terrible disease, and that it becomes the physician to investigate closely the history of each case.

That many cases of idiopathic epilepsy occur which are entirely beyond all known means of cure, is lamentably true; while it is possible that cases deemed hopeless might be relieved were physicians more accurate in scrutinizing them.

It may be remarked, in addition, that the practice of making an incision through the scalp over the sagittal suture, and of inserting the issue peas with a view of establishing steady counter-irritation in this situation, has been employed for some years past by Dr. Charles Evans, in the treatment of chronic affections of the brain, with very satisfactory results. The extensive opportunities enjoyed by Dr. Evans for observation on these diseases, as physician of a large insane hospital, renders his experience upon the question very valuable†.

THE LATE ABRAHAM COLLES, Esq. M.D. Dublin.

(From a Correspondent.)

With unfeigned sorrow we have had to announce the decease of Abraham Colles, Esq. M.D. during a period of thirty-four years Professor of Surgery in the Royal College of Surgeons, and for upwards of twenty the acknowledged head of the surgical profession in Ireland. This pre-eminence he enjoyed, as well by the decision of the public, evidenced by the vast extent of his practice, as by the judgment of his professional brethren, attested by numerous tributes of their admiration and esteem. Mr. Colles was a singular example of the attainment of the highest rank and honour, without having excited the jealousy of a competitor, or made an enemy by his success. If he were dearer to one class more than to another, it was to the junior branches of the profession, who not merely looked up to him as an experienced and eminent instructor, but even regarded him with veneration almost filial. As to the last honours paid yesterday to his mortal remains, they were the spontaneous expression of the feeling common to all who knew him, whether in his public capacities or in the relations of private life. The ashes of but few men, in our time or memory, have been accompanied to the tomb by a longer train of mourners, for the homage thus offered to his talents and virtues was as extended as the sphere of his professional exertions. He was widely known, and as widely respected, and we believe no man in this country had a more numerous acquaintance, or could count in the number so many devoted friends. This is not the place or the occasion for minute biographical details; suffice it to say that the career of Mr. Colles was of indefatigable activity; beginning with but little means, few friends, and no patron, he accumulated by persevering, independent, and untiring industry, an ample and an honourable fortune, and the highest reputation. No man ever brought to the science or practice of his arduous profession, a finer combination of the many intellectual qualities it requires: that enthusiasm so essential to success in any pursuit, he possessed in a remarkable degree; to this he united a soundness of judgment, and a nervous, masculine understanding, which preserved him from every speculative delusion, and mainly contributed to the confidence he inspired, and the solid reputation he enjoyed. As a lecturer, he was as highly estimated by the faculty as he was valued by the public for his practical talents. The perfect appropriateness of his style and manner to the subject-matter of his addresses, justly entitled them to the praise of eloquence, and when, in 1836, he retired from the chair of surgery, which he had so long filled with ability and applause, the discharge of his duties in that office was pronounced by the unanimous voice of the Royal College of Surgeons "as the principal cause of the success and high reputation of the School of Surgery in Ireland." On that occasion, that eminent and public spirited body waited upon Mr. Colles at his private residence, and presented him with a most complimentary address, as honourable to their feelings as it was gratifying to his own, as also a magnificent piece of plate, and which, by his last will and testament, he has bequeathed in an especial manner as an heir-loom to his family. In politics Mr. Colles was a liberal; that party had no adherent

* Van Swieten's Commentaries, vol. x. p. 483.

† From the Philadelphia Examiner Vol. vi. No. 2.

more devoted, more upright, more unselfish. In his latest days he looked back with proud and well-founded satisfaction to the support he had steadily given through life to the cause of Catholic Emancipation, and to every great question affecting the peace or liberty of Ireland. When his political party was in the shadow, it had no more faithful friend, none more ready to take his share in every exertion it required, and in every sacrifice it exacted; but when the sun returned, he neither participated, nor sought to participate in the prospects or the advantages that returned with it. The satisfaction with which a good man witnesses the triumph of principles he believes to be sound and virtuous, he felt and he enjoyed; but his enjoyment was more than disinterested, for he was not only no solicitor for the favours of the Whig government, but when in the distribution of high honours amongst the members of the medical profession, they most unaccountably overlooked his paramount and transcendant claims; whether it was neglect, or whether it was error, it never excited his displeasure or ruffled his tranquillity. Personal considerations had not attached him to the party, and personal slight could not detach him from it. He died as he lived, an honest politician, and an honest man—his motives pure, and his reward the testimony of an approving conscience, the fame that attends true philanthropy, and the disinterested love of truth and justice. In private life, the kindness, the usefulness of his nature, the cheerfulness of his temper, the simplicity of his manners, were attractions and endearments that will long be remembered by all who knew him, whether in his medical capacity, in the social sphere, or in the domestic circle. He has left behind him no gentler or sweeter private character. An acute observation of the world, a sagacious insight into human nature, manly sense, extended information, and a vein of peculiar good-natured pleasantry, were amongst the qualities that made his society most attractive, and his conversation most engaging. He formed his opinions with care, expressed them with singular but impressive modesty, and no man ever embraced or enforced an opinion or a tenet with more complete absence of bigotry. His experience and sound understanding rendered him a valuable counsellor in every affair of life, but he was even ready at all times to assist with more substantial succour, when the necessities of a friend required his aid, or any urgent distress appealed for sympathy. It need scarcely be stated that Mr. Colles had applied the powers of his strong and acute mind to that most important of all subjects, and of all earthly considerations. His respect for true religion was in direct proportion to the aversion in which he held hypocrisy and fanaticism; he entertained a rational and sober, but firm and sincere conviction of the great truths of Christianity; and it was in these, and not in the mere retrospect of a well-spent life, that he found calm consolation in his last hours; his reliance of a blessed immortality being firmly placed on the sure and certain hope of the sincere and faithful christian.

OVARIAN OPERATIONS.

(*From a Correspondent.*)

We understand that Mr. Walne not long since put to the test the safety and value of the tentative or preliminary section in ovarian operations. He had ascertained satisfactorily its utility by employing it in each of the three successful operations, by the large abdominal section, published in the Medical Gazette, and since re-published, with additional details and practical remarks, in a separate form; but the cases having presented no obstacle to the completion of the operation, afforded no positive evidence of the safety with which it can be used in instances which prove so complicated that it is desirable not to proceed with the main undertaking. As far as one case in his hands goes in proof, he has now gained assurance of the safety of this proceeding; having desisted at this stage of an operation in consequence of adhesions of wide extent, between the peritoneum of the abdominal parietes and of the cyst, being found to exist. The patient was tapped some days after, has been so again, and is quite as well as she would have been had no operation been attempted; but she appears earnestly to regret that, at all hazards, extirpation had not been completed.

An operation has also been performed by Mr. W. with a fatal result. The case was one greatly complicated, and the disease, in the opinion of the lady's own medical advisers, would probably have put a period to the patient's existence in a few weeks, even if no operation had been performed. The details are said to be replete with interest and instructive circumstance. They will shortly, we believe, be laid before the profession through the medium of the Medical Gazette, but in the meantime have been less fully narrated at a large meeting of a Metropolitan Medical Society.

MEDICAL ELECTIONS.

To the Editor of the Medical Gazette.

Sir,

These are indeed days, as you astutely remark, in a recent leading article, charac-

terised by "the feverish hurry of modern existence."

We have clearly reached the "confusion point" in the social thermometer, and particularly as regards the present medical management of hospitals and dispensaries.

Until lately the medical officers of a hospital or dispensary were gentlemen, who, after having with much toil and trouble, solicited the suffrages of the subscribers, were when elected to assist in dispensing the benefits provided by such charitabe part of the community, and were therefore to be considered instruments in their hands for such good purposes.

But now it seems as if things were to be reversed, and that each medical staff is to be an oligarchy, or even tyranny by commission, so to speak, and the governors, God save the mark, are humbly to bow to their judgment in all things, but more especially in the election of the persons who are to distribute the very means they pay for.

The elections now progressing at the two western hospitals are examples of this state of things, not to cite other instances of a less striking description.

Now, were these combinations always entered into with the singleness of purpose of those whose only objects are the promotion of science, the good of the poor, and the general furtherance of the welfare of medical charities, the goodness of the effect might in some sort excuse the cause, but when, I am afraid, that other and less worthy interests have weight, this state of matters requires some remedy.

Let each charity employ its medical officers to select, if they please, candidates to fill the offices of physicians, surgeons, &c.; but let no further collective influence be used by them, for I am sure that any such attempt at dominance over the body of subscribers at large will only tend to disgust them with medical charities, and will deprive the poor of assistance, and the community of valuable results derived from the existence of so many means of studying disease.

It will be in the recollection of many that some years since a similar interference caused the nearly total closure of the wards of a great metropolitan hospital.—I am, sir,

Yours obediently,

JUSTITIA.

December 11, 1843.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, Dec. 14, 1843.

C. Miller, Great Wakering, Essex.—J. H. Browne, Southampton.—T. Kerry.—J. T. Winnand, Wigan.—S. M. Marshall, Wakefield.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, December 9, 1843.

Small Pox	12
Measles	26
Scarlatina	47
Hooping Cough	36
Croup	13
Thrush	4
Diarrhœa	3
Dysentery	3
Cholera	0
Influenza	5
Ague	0
Remittent Fever	0
Typhus	29
Erysipelas	4
Syphilis	0
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	141
Diseases of the Lungs and other Organs of Respiration	375
Diseases of the Heart and Blood-vessels	30
Diseases of the Stomach, Liver, and other Organs of Digestion	66
Diseases of the Kidneys, &c.	6
Childbed	7
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	2
Arthritis	0
Rheumatism	1
Diseases of Joints, &c.	1
Carbuncle	2
Phlegmon	0
Ulcer	0
Fistula	1
Diseases of Skin, &c.	1
Dropsy, Cancer, and other Diseases of Uncertain Seat	80
Old Age or Natural Decay	68
Deaths by Violence, Privation, or Intemperance	13
Causes not specified	11
Deaths from all Causes	987

METEOROLOGICAL JOURNAL.

December.	THERMOMETER.	BAROMETER.
Wednesday 6	from 39 to 48	29·92 to 30·00
Thursday . 7	36 53	29·94 29·76
Friday . . . 8	53 40	29·80 29·85
Saturday . 9	29 42	29·90 29·93
Sunday . . 10	39 45	29·92 29.89
Monday . . 11	46 36	29·92 29·94
Tuesday . 12	30 34	30·02 30·06
Wednesday 13	from 30 to 40	30·06 Stat.
Thursday . 14	34 46	30·11 to 30·08
Friday . . . 15	40 51	30 00 29·98
Saturday . 16	42 54	29.98 30·01
Sunday . . 17	51 40	30·04 30·06
Monday . 18	31 54	30·06 Stat.
Tuesday . . 19	42 45	34·06 Stat.

Wind, S.W. on the 6th, 7th, and 8th; W. on the 9th; S. and S. by E. on the 10th; S. by E. on the 11th, 12th, and 13th; S.W. on the 14th and 15th; W. by N. on the 16th; W. by S. on the 17th and 18th; W. by N. N.W. and N. on the 19th.

The 6th, clear. 7th, generally cloudy. 8th, clear. 9th, morning clear, afternoon and evening general overcast. 10th, generally cloudy. 11th, morning cloudy, evening clear. 12th, thick fog. 13th, generally hazy. 14th, clear. 15th, generally cloudy, high wind during night. 16th, generally cloudy. 17th, generally clear. 18th and 19th, generally overcast.

WILSON & OGILVY, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, DECEMBER 29, 1843.

CLINICAL OBSERVATIONS

ON

HIP-JOINT DISEASE.

By Benjamin Phillips, F.R.S.

Surgeon to the St. Marylebone Infirmary; Assistant-Surgeon to the Westminster Hospital.

Where you find many children collected together, and more especially where many have been ill fed and neglected, you have frequently occasion to see "hip disease." Considering, however, that we have in this establishment, in the different schools, usually not less than 500 children; and considering, too, that many of them when admitted are debilitated, or diseased, the number of cases of this affection coming under treatment is certainly small. The disease is one which demands the serious attention of every medical man, because for the most part it is a disease of early life; and if detected early, and properly treated, may frequently be subdued; but if neglected at that period, or improperly treated, the result is either incurable lameness, or the loss of the child's life by wasting abscess.

This disease, known as coxalgia, morbus coxarius, luxatio spontanea femoris, is commonly known among us as hip-joint disease; and we prefer either of the other terms to that of luxatio spontanea femoris, because if we succeed in treatment the luxation may never occur.

In the earlier period of its progress the symptoms are variable: there may be a dull pain in the region of the hip, but it may be absolutely wanting; and then it may be that a certain want of power in the limb, a certain tendency to limp, and a sense of stiffness in the morning, are the only symptoms which are observed. When the pain exists, it is usually at first not permanent; but it may increase towards evening, like rheumatism. When the pain becomes more fixed, it will not always be complained of at the same point. Sometimes it will be most felt above, sometimes below, sometimes at the level of the joint; sometimes at the groin. When the pain becomes fixed, it is much increased by motion, and especially by pressure upon the trochanter. In some cases the pain is not severe at the hip, but is fixed at the knee-joint, or it may extend along the whole limb. When the pain is fixed at the knee-joint, or at the ankle, it is sometimes so severe as to mask the hip pain, and to mislead an ignorant practitioner. A case occurred to me some time ago in which the symptoms at the hip were so trifling, and those at the knee so severe, that the friends doubted the correctness of my opinion, and took the child a long way off to consult a man "noted in joint cases;" he placed issues about the knee, neglected the hip; in a few weeks extensive abscesses formed around the hip, and the child died. It has been suggested by more than one experienced surgeon that pressure on the knee in such cases does not increase the pain, and that that will serve to determine whether the mischief be there. My own experience does not confirm the value of that test. I have again and again known loud cries to be uttered in such cases upon pressure when there was no disease in the knee-joint. Again, it has been said that there is no swelling of the knee in such cases, but my own experience does not entirely confirm the correctness of this remark.

These symptoms may last for months, or even years, the patient being occasionally better and worse. The leg may be a little dragged, and the foot may be turned a little outwards. Sometimes from the first the symptoms are acute, the pain severe, with tumefaction, fever, and an inability to move the limb. In this place, not long ago, we had two cases, a boy and girl, who came under treatment early, who were bled, blistered, and cauterised, and the joint kept motionless, but the progress of the disease could not be arrested.

The three important symptoms, however, in the first period, are pain, apparent elongation of the limb, and the limping.

In the second period of the disease the symptoms are more strongly marked. The apparent lengthening of the limb continues, at the same time the flexor muscles of the leg are set in action, and the patient rests on the toes; the buttock of the affected side is flattened, the thigh is lessened in size and firmness, and the trochanter seems more prominent. Every movement which brings the articular surfaces in contact is now very painful; the whole weight of the body is therefore directed upon the sound limb.

The third period is characterised by shortening of the limb, whether there be luxation or caries. Usually the shortening is accompanied by the ordinary signs of dislocation upwards. The foot is rotated inwards, the trochanter is directed upwards and forwards. You may, however, see shortening without any change in the direction of the foot; but this is rare; it happens when the floor of the acetabulum gives way, and the head of the femur is jammed into it. You may see the apparent elongation suddenly become real; the head of the bone may be dislocated downwards into the thyroid foramen. This is also a very rare occurrence.

The third period in the progress of the disease is more strongly marked than either of the others. The limb is shortened, and sometimes there is an end of the disease; the pain diminishes, the head of the bone hollows out for itself a cavity; but there is incurable lameness. Most commonly, however, a painful tumor is formed around the joint; fluctuation is soon observed, and either it bursts, or is opened, and a quantity of pus escapes. It is at this time, according to Dzondi, that the pain at the knee becomes most severe. In most cases the opening becomes fistulous; in others it closes after a time.

If the child sinks under the irritation, the abscsss having been opened, the appearances presented after death are very variable. The parts around the joint are often infiltrated with pus; the sinuses may communicate even with the joint; the capsule is more or less completely destroyed; the soft parts within the acetabulum are often tumid, so as to push the head of the femur out; at other times they are broken down and carried away. Sometimes the round ligament is destroyed; at others it is considerably elongated. The cartilage lining the acetabulum as well as that covering the head of the bone, is either softened or destroyed, and the bone itself is exposed and carious, and anchylosis may occur. In some cases the fundus of the acetabulum has given way, and the pus from the joint has found its way into the rectum. In one of the specimens before you the acetabulum has lost every vestige of cartilage, so has the head of the femur; therefore there is no correspondence between the size of the head of the bone and the containing cavity: in another specimen the two bones are anchylosed. In other cases, while the acetabulum is nearly denuded, the head of the femur has scarcely suffered. In other instances it is the head of the femur which has principally suffered. And in these cases there may be a real though inconsiderable shortening, while the head of the bone is in the acetabulum. The head of the bone, however, is not unfrequently found on the dorsum of the ilium; it has been found on the thyroid opening.

You see that the appearances upon examination after death are very variable; and opinions on the subject are not less variable. If, when opportunities of making such examinations are so frequent as they are in the latter periods of the disease, the opinions are so discrepant, we might naturally expect that there would be greater differences with reference to the earlier stages of the disease, where the opportunities of investigation are unfrequent; and it is so. Thus, if we take that important featnre of the disease, the lengthening of the limb, how differently is it explained. One man says it is owing to the pressure exercised on the head of the bone by the accumulated synovial fluid. This accumulation of fluid is by no means proved to be a common occurrence. Sir B. Brodie seems to have met with it only once or twice.

Although it is possible that at a particular time, in a particular case, there may be a slight elongation of the limb, it is certain in ordinary cases the elongation is only apparent. As soon as the patient begins to feel discomfort at the joint, he begins to spare that limb; he supports himself mainly with the other; the crest of the corresponding ilium is elevated above its fellow, and the limb of the affected side is, to that extent, apparently longer than the other, and the foot is advanced. This symptom may therefore, at an early stage of its existence, be dissipated by the patient keeping his bed a few days, but if it has existed long it may have induced a certain amount of curvature of the spine, and then the horizontal position may not so easily right it. It is certain, however, that cases of real elongation may occur when the head of the bone descends into the thyroid fossa; but this seldom happens.

However characteristic may be the ordinary symptoms of hip disease, every day we see that they are mistaken, particularly in the earlier stages of the disease. Let us now look more narrowly into the value of

the several symptoms. One of the earliest signs is a certain amount of pain or uneasiness; often it is felt during walking; sometimes it can be produced by suddenly pressing upon the trochanter or upon the heel, the limb being extended; sometimes it is severe. But recollect, the absence of pain is no proof that there is no mischief at the joint. An important feature is an apparent or real lengthening of the limb; but it is necessary to be very careful in making the examination, to determine this point. For this purpose various plans have been proposed: *e. g.* Place the patient on his back in bed: with a piece of tape measure the exact distance between the anterior and superior iliac spine, and the superior border of the patella; whatever be the inclination of the pelvis, if the distance be equal on both sides, the length of the limbs must be equal too. Some persons have desired to test the matter in other ways: the patient may be placed upon a chair in the sitting posture, as I now place this child, sitting so far back that the spine rests fairly against the back of the chair; we then take care that the legs are directed forward exactly parallel to each other. First we compare the two knees to ascertain whether one projects beyond the other; we then compare the two heels. Again, some surgeons rely most on an examination in the erect posture. My own notion is, that if there be any doubt we should try all; because when the signs are equivocal, the importance of correct diagnosis is most pressing. The standing posture enables us to observe the direction of the spine and the pelvis, as well as the prominence of the trochanter: this we do by standing behind as well as before the patient. This apparent lengthening is an important sign when associated with others, alone it is not worth much. Sir B. Brodie regards a flattening of the buttocks as one of the most constant signs of ulceration of the cartilages. That flattened appearance is accompanied by flaccidity, and it looks altogether larger than that of the opposite side. Usually, if not always, this flattening and flaccidity are the results of inaction of the glutæal muscles. Sir B. Brodie relies much on this sign to distinguish between ulceration of the cartilages and inflammation of the joint; in the latter case there is, he says, increased fulness, tumefaction. It would become me to differ with much hesitation from this opinion; but I confess I do not entirely coincide in its correctness; neither do I in the opinion that the amount and kind of pain is a test between inflammation of the joint and ulceration of the cartilages. At the same time I have no doubt that to him they are sufficiently distinctive signs.

There are diseases with which that of the hip is but too frequently confounded. Among these are "congenital dislocation," rheumatic inflammation of the hip, and suppuration following caries or necrosis about the joint.

In congenital displacement the limb is shortened from birth. If we place the child on the bed, fix the pelvis, and pull at the leg, we can without pain elongate it, but when the traction ceases, the shortening is again quickly manifested; the head of the bone can be felt moving in the iliac fossa; there is no pain; the thigh can be freely moved, and the sole of the foot rests on the ground. We distinguish hip disease from rheumatism of the hip, by the character of the pain, which before it attacked the hip may have affected other parts. Chronic suppuration about the hip, following caries or necrosis, can be distinguished from that of hip disease, by the occurrence of less pain when the thigh is moved, by the continuance of the pain when the joint is at rest. Still you may have to do with complicated cases, which may present great difficulty; abscesses outside the joint have perforated its capsule, and other complications may occur.

The course, then, of hip disease is very variable; you have seen here cases where between the time of the first appearance of limping to the dislocation of the bone, only a few weeks have elapsed, and that in defiance of the most energetic treatment. There is a case now before us, where the boy has been under treatment many months; where the symptoms have abated, where the head of the bone is still in the acetabalum; but where slight motion, even now, would quickly aggravate the mischief. Indeed, it is astonishing how much we seem to be able to do in very chronic cases occurring in scrofulous children, by improved nutrition, and absolute rest of the joint, provided we can subdue the early and more urgent symptoms. But it is remarkable how long a time will pass in some cases before the evidence of mischief becomes very decided; and how large an opportunity we have for attempting to subdue the disease; how much in such cases good air and good food will do to relieve the patient. In many cases we are not consulted until the head of the femur is in course of being displaced, and all that is left for us to do is to endeavour to prevent suppurative action, and to keep the limb so far extended as to get a new joint formed as nearly as may be to the old one. In this we often fail: larger abscesses form, they may burrow through surrounding parts, open at several points, and the patient may be worn down by the discharges.

Some surgeons have entertained notions that they could at a comparatively early period predicate the probable course of the disease. Boyer thought he could point out

the direction in which the displacement would occur. He reasoned thus: when there is much elongation of the limb from the beginning, when the pain is great, with tumefaction of the upper part of the thigh, we may presume that the disease is owing to engorgement of the synovial gland, and the articular cartilages; that the head of the femur will escape by the upper part of the cotyloid cavity, and that it will glide upon the external surface of the ilium. Under opposite circumstances, it is more probable that caries will cause the displacement, which will then happen sometimes on the superior and external, sometimes by its internal and inferior border. When the affected limb, for some time much longer than the other, preserve its natural rectitude, and the faculty of exercising rotation, though with pain, and that abscess forms in any part of the thigh, we may presume that the fundus of the cotyloid cavity is carious, and that the disease may become mortal even though the bone may not leave the acetabulum. When the disease terminates in ankylosis, the limb retains the position which has been given to it. When the disease is cured by the formation of a new joint, a hollow is made at the point upon which the head of the femur rests; the head becomes flatter under this pressure itself, and smaller. And the surrounding structures are modified so as to be converted into a capsule.

In the greater number of cases we are unable to assign any evident cause of hip-joint disease; it seems to be the result of a debilitated constitution. In some cases, however, something occurs to set up a diseased action in this part, such as a fall or other injury done to the trochanter major, or the knee, or the foot, the limb being extended; but certainly we frequently see it after affections such as small-pox, or measles, which have still farther enfeebled an already weakly child, and when no direct injury has been sustained by the joint.

Now let us see what plan answers best for the treatment of this affection. Unquestionably absolute rest is of the last importance, whatever be the general and local treatment employed. Its good effects you could appreciate in the case of the child before us. When he came under treatment, you will recollect I thought badly of the case. I ordered him to be cupped, though pale and scrofulous; and I mentioned to you at the time, that I was less afraid than some people are to take blood locally in cases of scrofulous inflammation. There is always a certain amount of congestion, though the symptoms may not be active; and much relief is often afforded by such local abstraction of blood, and I have never known it produce any bad effects. He was afterwards blistered; the limb was kept immoveable by the long splint; and you see the result. I have a strong conviction that, if motion had been permitted, the case would have done badly. The limb was kept motionless nearly three months; and after that it was only very gently moved for some time. If the limb be left at liberty too soon, all the good which may have been obtained from a month or six weeks' repose is soon dissipated. No doubt such a plan is very fatiguing, especially to young and restless patients, who cannot be convinced of the necessity for it; but it is a small matter to put in competition with the condition of a cripple for life. To maintain a complete repose for the joint many plans have been suggested—more or less modifications of apparatus for fracture of the neck of the thigh bone—and, generally, several months should elapse, before they should be laid aside.

This disease is so constantly associated with a debilitated constitution, often scrofulous, that particular care must be bestowed upon the general health. Good food, and sometimes tonic medicines, must be given to improve nutrition, which is commonly defective. Good air is no less essential; but about this there is often difficulty, from the necessity of keeping the limb fixed in extension. The rich man's child can have carriage exercise in the open air; while the poor man's child is commonly doomed to its narrow room: this is one of the privations which poverty brings with it. I have already stated that I am favourable to the local abstraction of blood, even in pale, flabby, scrofulous-looking children: the quantity taken each time may be small—even a couple of ounces once a week—while you fortify the general health. In many cases, where the health of the patient is good, and the symptoms acute, a larger quantity of blood may be taken at a time. When the acuteness of the symptoms is subdued, counter-irritation should be steadily kept up, either by means of perpetual blistering, caustic issues, setons, moxas, or the actual cautery. If we employ the first agent, we should repeat the blister every six or seven days, until all pain is dissipated: it is therefore better to apply circular blisters of not very large size around the joint, so as to keep up the irritation as long as possible on sound skin. Some surgeons prefer to apply one large blister, and keep it open. Setons and issues are unquestionably more energetic counter-irritants than one, or even two blisters; but I do not think they are so powerful in their action as a succession of blisters. Besides, both issues and setons are often very troublesome: the granulations on the issues become fungous, and push out the peas; a similar fungous condition of the seton is very common; and in both cases the discharge from them becomes ill-conditioned, and all salutary in

fluence is destroyed. Besides, I think the discharge from such new surfaces, when long continued, ceases to be useful: I think them much more efficacious when frequently renewed.

Some surgeons are content, after cupping, to rely much upon comparatively mild means, such as lowered diet, warm fomentations or baths, diaphoretics, tartar emetic, and opium —indeed such means as might be employed in more superficial inflammatory action. It is true they employ these means in the first period, and, if necessary, resort to counter-irritation subsequently, such as tartar emetic ointment, blisters, setons, cauteries. My objection to the freely antiphlogistic treatment, even in the first period, is this: a large portion of those suffering from hip-joint disease are weakly scrofulous children; any general treatment which tends still farther to lower them is clearly wrong, because inflammatory action becomes additionally mischievous where the powers of life are already depressed. I am always prepared to act with vigour locally; but, for the reasons I give, I do not approve of any means which have a direct tendency to lower the powers of life.

Rust carried out farther than any one I know a very energetic plan of treatment locally—the actual cautery, which he used in the first stage of the disease, but after having removed blood from the part by cupping or leeching. His plan was to use the cautery as soon as there was evident apparent lengthening. His cautery had converging rays—either three, four, or five, according to the age of the patient and the effect sought to be obtained: the largest ray was applied along the course of the sciatic nerve, the next immediately behind the great trochanter, the third directly over the great trochanter itself. The extent of the cauterisation depended on the condition of the patient.

Few men would be found to deny the great value of the actual cautery; but only a very few have the courage to use it. Every surgeon knows that we employ, without any hesitation, much more painful means; but few patients will submit to the remedy if they can help it. Most, if not all, of the good effects of the actual cautery may be obtained from moxas. I believe they are more painful than the red hot iron, which is unquestionably very severe for a moment; but I have no question that the gradual burning by moxa is worse. Still a patient would not object to the one, while he would refuse to submit to the other. In neither case do I think a slough should be made. I think counter-irritation is most effectual when the skin is entire; and therefore, in either case, I only allow the agent to remain in contact long enough to produce a yellowish horny hardening of the skin; but this I do, at the same time, at several points around the joint.

When, spite of our treatment, large abscesses form, men are not agreed as to the proper plan of treatment: some surgeons open them early; others wait until the pointing is decided. It is not easy to decide between them. Small collections of pus are now and then absorbed under counter-irritant treatment; larger collections are apt to burrow, and break down surrounding tissues. Then, when we determine to open them, there is as much difference of opinion as to the means of doing it. If we make valvular openings, and quickly close them up, the cavity will fill again; and although we may block up the opening quickly two or three times, in the end it becomes fistulous; hectic fever may come on, and death. Suppose you make a free opening with a knife, or caustic, you are no better off; and in many cases constitutional disturbance quickly follows. I think, therefore, it is wisest to keep up energetic irritation in the neighbourhood, and keep the cavity close as long as you can; but most cases do badly.

If the symptoms abate, the quantity of pus being lessened, and the fluid assuming a better appearance, and the slough being kept up, the patient may gradually recover. In that case you must be particularly cautious to keep the parts as quiet as possible; for apparently very trifling causes will light up severe mischief.

A question has been much considered of late years: it is, whether, when every thing is quiet, any attempt should be made to replace the head of the bone in the acetabulum. To enable us to decide properly in this case, we should know what has happened to the acetabulum. Most surgeons are of opinion that the cavity becomes filled up. Cases are recorded where it has remained very little changed. Some persons having assumed this to be the common condition, many attempts have been made to replace the bone, by extending the limb until the head of the bone is brought to what is conceived to be its proper position; it is maintained there for a long time, and at last it becomes adapted to its new position. Much doubt seems to be entertained whether we can expect to succeed, though cases have been exhibited in which the treatment was, it is alleged, successful. I have never known any thing sufficiently decided or encouraging to induce me to recommend it for your adoption.

ON THE AVERAGE NUMBER OF DEATHS IN CAPITAL OPERATIONS.

To the Editor of the Medical Gazette.

Sir,

I shall be obliged by your inserting in your journal the results of operations during a practice of twenty two years. What led to their arrangement, &c. is fully explained in the paper.

I am, sir,
Your obedient servant,
John P. Halton,

Fellow of the Royal College of Surgeons of England, and Surgeon to the Liverpool Infirmary.

74, Mount Pleasant, Liverpool,
Dec. 8, 1843.

In lately reading over the reports of several cases in which ovarian tumors had been removed, I have remarked, that the advocates of that operation, recommend it as "a perfectly legitimate and more than ordinarily successful operation," and in their zeal to enrol it among the legitimate and established operations of surgery, have used arguments which appear to me tending to detract from the success, and consequently the safety and value, of all the established capital operations, which form the constant routine of hospital practice.

Far from desiring to withhold from these gentlemen the praise due to their exertions to relieve, by operation, the subjects of ovarian enlargement, from a disease for which they believe no other means of relief can be relied on, I cannot but regret that they should, at least, have the appearance of attempting to exalt this operation in the estimation of the profession, at the expense of all other capital operations, by a sweeping deterioration of their success.

I cannot pretend to estimate the opportunities these gentlemen have had, either of performing or witnessing the performance of the great operations of surgery, or how they have arrived at such conclusions as to the results, unless it be from the limited reports hitherto published; but certainly, I must confess myself to have been so startled at their assertions of the unfavourable results of all established capital operations, differing as they did with the impression on my mind of the experience of my own practice, that I resolved to refer to the records of the last twenty-two years; the first period of four years and a half being occupied as surgeon to the Dispensary, the latter of nearly eighteen years, being engaged as surgeon to the Liverpool Infirmary: the examination proved the correctness of my impression.

Mr. Phillips, in a paper read before the Royal Medical and Chirurgical Society of London, Nov. 14, 1827*, "as to the correctness of the returns upon which his statements were founded, some doubts were expressed," states: "It has happened on several occasions, that the medical men to whom I have applied for results of their individual experience, have at once said, 'I very rarely lose a case after amputation,' and when they have referred to their own notes, or to the hospital records, where such a thing was practicable, they have been astonished at the extent of the mortality. These circumstances alone would be sufficient to shew the fallacy of resting our belief on vague impressions, and the necessity of some more exact evidence upon which to found opinions†."

This is not my case; the examination has proved that I had not been led astray by any "vague impressions;" on the contrary, that my impression fell short of the actual amount of success, and it created a strong inclination to give the result to the profession.

I hesitated, however, as to the mode in which this should be done: to give a detail of the number of operations performed, appeared to me so very like an advertisement, anything bordering on which I have always deprecated and so studiously avoided, as in many instances to have fallen under the censure of Mr. Phillips, when he says, "if the practitioner suppress successful cases an unfavourable impression may attach to beneficial practice‡." To this omission I must plead guilty; entirely from this feeling I have neglected to communicate to the profession many interesting cases, attended with successful results from operations, which I have been told ought to have been published.

I fully estimate the sentiment of

* Medical Gazette, June 9, 1838, p. 457.
† Ib. p. 458.
‡ Medical Gazette, October 9, 1840, p. 83.

Mr. Phillips, when he says, "I feel strongly the importance of recording on a large scale the risk attendant upon the performance of all operations*." And though I do not quarrel with him for being anxious for a record of the *risk*, I could have preferred his being desirous for a record of the *success* attendant upon the performance of all operations.

The risk of an *established* operation, I believe to be, in itself, small. Is it not the absence of risk which establishes the operation? The risk appears to me to lie in the manner in which it is performed: and if the profession, in its estimate of the value of operations, is to be influenced by the success attendant upon them, I agree with Mr. Walne, "when he would limit the performance of so formidable an operation as extraction of ovarian tumors, to surgeons qualified by habits of operating, &c.,"† he clearly believing that some portion of the risk lies in the manner in which it is performed.

This would prove a matter for serious consideration, in the event of obtaining "a record on a large scale of the risk attendant upon the performance of all operations;" for it would by no means be a fair criterion of the value of an operation, if failures which could clearly be proved to arise from the *mode* in which the operation had been performed were included in the record! For example, is the average of success from the operation of ligatures on large arteries, to be damaged by the registry of an operation for tying the branchial, in which the limb gangrened, and upon examination after removal it was found that the median nerve had been mistaken for the artery and tied, which necessarily proved unsuccessful? or, is an unsuccessful operation of ligature on the subclavian for aneurism, wherein it was found one or more of the cervical nerves had been included in the ligature, to be taken into the account? or, are unsuccessful operations which have been undertaken by young surgeons, after the proposals for operation had been condemned as unjustifiable by men whose station and experience in the profession afforded them the best means of judging of their practicability and success? All these examples have occurred in my own knowledge, and how many more such instances might be added to the list, I do not know: perhaps Mr. Phillips had some such cases in view, when he stated, that "very few members of the profession are at all aware of the extent of mortality consequent upon surgical operations*."

Fully agreeing then with Mr. Phillips, in the importance of having a general record of all cases of capital operations, I cannot but believe, that were such obtained, judging from my own experience, and the success of those with whom I have been associated in hospital practice, he could have much other foundation for the remark, or that such assertions as the following would pass current.

Alluding to the operation of removal of ovarian cysts, he says, "I think no one can doubt that an operation which under adverse circumstances has succeeded nine times out of twelve cases ought to be resorted to, &c.†" "We do not hesitate to have recourse to the ligatures of large arteries, and regard it as a justifiable operation, though the results are much less favourable; we do not object to perform amputation of the thigh, although nearly two out of five die‡."

Dr. Clay says, "when compared with the results of other capital operations, lithotomy, lithotrity, and even amputation, it stands in a far more favourable position, and it is a very strange prejudice indeed, that can admit those capital and more frequently fatal operations above mentioned, as legitimate and advisable, whilst one less fatal is summarily condemned."‡

These premises I believe to be inaccurate; my individual experience is decidedly at variance with them, as will be found in the sequel.

Having consulted with a medical friend, on whose judgment I could rely, upon the propriety of giving to the profession the results of capital operations during a practice of twenty-two years, he was of opinion, that I could not only with propriety do so, but that the publication might be attended with advantage to the profession, as it would probably induce other hospital surgeons to follow the example, by which means we might ultimately obtain the important general record the

* Ib.
† Medical Gazette, December 28, 1842, p. 444.

* Medical Gazette, October 9, 1840, p. 83.
† Ib. p. 87.
‡ On Extirpation of Diseased Ovaria.

want of which is so much felt at this crisis, to correct, the what I believe to be, erroneous assertions put forth to the disparagement of operative surgery.

I therefore no longer hesitate, but before entering on the statement, I may as well premise, that it is derived from a careful perusal of open records kept by my pupils, some of whom are now settled in practice in the town or neighbourhood, and who, were it necessary, could attest to their accuracy. For the reason already stated, I shall withhold the number of capital operations performed, and confine myself to a detail of the class of operation, and the average result from each, with a brief outline of the cases of death.

My present limits will not admit of my entering into an examination of the different results between primary and secondary operations in cases of amputation. And as to instituting a comparison between immediate and consecutive union, I may remark, that in my experience of the Liverpool Infirmary (thirty years) I never remember any other treatment than union by adhesion being attempted. To accomplish this, great care has always been taken in the first adaptation of the flaps (for the flap operation has been the almost invariable practice, as will be hereafter described), and such an anxiety has in many cases been manifested to obtain it, that the irritation of sutures has been avoided, the flaps being lightly adjusted and sustained in approximation by strips of plaster, in the composition of which resin formed no part.

Still, I consider the remarks of Mr. Phillips on this subject* admirable, and the modification he recommends well worth the consideration of all operating surgeons.

For the information of those who cannot be expected to appreciate what opportunity may have been afforded to warrant my appearing before the profession under such circumstances, I may quote the report of some part of the surgical practice of the Liverpool Infirmary, as returned to the Committee of the House of Commons in 1834. It was required to state the number of capital operations performed by the three surgeons, Mr. Bickersteth, Mr. Dawson, and myself, in the previous four years, and the number of severe accidents and cases of fractured bone; of the latter, one thousand four hundred and eighty were returned, and two hundred and twenty capital operations.

In forming the average of death, I have not adopted the mode peculiar to some of the records of the operations for the removal of ovarian tumors, viz. confined myself to the result of "well selected cases," and where a death occurs placed it in a "different category." To this I object equally with the writer of the article in Dr. Forbes' British and Foreign Medical Review, for October last, p. 392, "as by no means a fair mode of estimating the result of the operation" or any operation. Were this example followed, I should of course have only to record a series of uninterrupted success for the last twenty-two years.

I conceive, if there be any advantage in the record of the results, it will consist in the publication without reservation of the results of all cases which of necessity the surgeon has been called upon to treat, however little the prospect afforded of success; and this I shall proceed to do.

With the imperfect statement as yet before the profession, as to the results of all the operations which have been performed for the removal of ovarian tumors, I find it difficult to arrive at a correct estimate of the safety, success, or value of this operation. It is very encouraging to hear of a few suceessful cases, but to form a safe conclusion we should have the particulars of the successful and fatal cases, place them side by side, and enter into an analysis of the merit or demerit of the minutiæ which appeared either to promote success, or to contribute to the fatal termination.

The operations I have to record, comprise

1 Amputations of the thigh and leg, and arm, above and below the elbow	In cases of disease of the joints or severe compound fracture, with a view to save life.
2dly. Amputation of portions of the foot and hand	To save such remainder as would render them tolerably useful afterwards. In cases of compound fracture and laceration, occasioned either by being drawn in between the wheels of machinery, or otherwise crushed, or resulting from the bursting of fire-arms.

* Medical Gazette, June 9, 1838, p. 462.

3dly. Excision of joints, either complete or partial, of the knee, ankle, and elbow	In cases of compound dislocation of the joints, complicated with fracture of the bones entering into their formation, with a view to save the limb.
4thly. Lateral operations on the bladder	To remove foreign body or stone
5thly. Ligatures on large arteries	In popliteal and subclavian aneurism.
6thly. Operations for strangulated bowel.	In femoral, inguinal, and scrotal hernia.
7thly. Amputation of portions of bone	In the varied cases of compound fracture, with a view to save the limb.
Lastly. Removal of tumors.	Scirrhus, osteo-sarcomatous and carcinomatous.

In amputations of the thigh, I have to record *one death in eleven.* The assertion to which I object is, that "nearly two out of five die."

In analysing the deaths, I find that the cases in which it was deemed necessary to amputate were persons whose limbs had been shattered by entanglement in the wheels of machinery, or smashed by the passage of railway carriages over them, or resulting from falls from lofty buildings.

Surgeons who have been accustomed to see such accidents need not be reminded of the amount of shock under which the vital power labours in such cases. The operation of amputation, though deemed a justifiable and necessary one, under such circumstances, cannot be relied on as affording much prospect of success. For instance, one of the deaths which reduce the average of success, resulted from a complication of injury received in consequence of a fall from a high building on to a flagged parapet; viz. considerable contusion of the elbow-joint and head, with concussion of the brain, accompanied with compound fracture of the thigh laying open the knee-joint, and simple fracture of the same leg. At the earnest solicitation of the friends, who hoped the removal of such a frightful mass of destruction might afford a chance of recovery, amputation was performed.

In the amputations of the thigh, the double flap operation, before and behind, was adopted, making the anterior flap the longer of the two in order to allow of its falling over the end of the bone, by which the line of the cicatrix was carried behind it. This mode of making the flaps in thigh amputations was adopted by Mr. Bickersteth, my colleague at the Infirmary, and my experience of his operations, which extends over a period of thirty years, warrants me in stating that his success has been great.

The peculiarity consists in making the first incisions through the integuments only, which are allowed to retract, and if necessary from the bulk of the limb, are dissected back a little. The division of the muscles is effected by transfixing the thigh with the catline, introducing its point at the nearest angle of the first incision, and bringing it out behind the bone at the opposite angle; it is then swept boldly out in a direction corresponding with the line of flap; the division anterior to the bone is made in the opposite direction from without to the angles of the flaps of integument: the stumps are excellent.

We are indebted for the adoption of the flap operation to Mr. Alanson, who was surgeon to the Liverpool Infirmary twenty-four years, from 1770 to 1794: since his time the flap operation has almost invariably been performed at the Liverpool Infirmary.

In amputations of the leg, I have to record *one death in six.*

In this average, success is very much reduced by the death of five cases in which amputation afforded but little hope of saving life. Three of the cases whose ages were between sixty-three and seventy four, were compound fracture complicated with great comminution of bone, and extensive laceration and destruction of the soft parts, and exhibiting evidence of great influence of shock on the vital power. One, a youth of eighteen, reduced to the last degree by scrofulous disease of the ankle-joint: the operation was performed with but litlte hope of success; he survived only three days. The fifth

case was compound fracture of both legs, and frightful laceration of the soft parts; indeed, the limbs were all but severed by entanglement in a mill-wheel. The shock in this case must have been intense; still sufficient vital energy remained to induce the trial of immediate amputation: he bore the operation better than was expected, very little blood was lost; he fainted on removal to bed, but soon rallied with the aid of the usual stimulants, and died nine hours and a half after the operation.

In amputations of the arm, above and below the elbow, I have to record one death in eighteen.

In this calculation the average of success is reduced by one case, in which amputation was only performed at the earnest request of the poor fellow, who was brought from a distance expressly to have the limb removed. He was so emaciated by the suffering incidental to disease of the elbow-joint, that little or no prospect was entertained of his recovery. He lingered nine days after the operation without any attempt at restoration being manifested, and upon examination of the stump after death, the flaps fell asunder spontaneously; no attempt at union had been made. The causes of death in the other cases not explained.

In amputations of parts of the hand or foot, the deaths were *one in thirty-six.*

The causes of death, tetanus or gangrene.

In the operations of excision of joints, partial or complete, of the knee, ankle, or elbow, the deaths have been *one in seven.*

Of the deaths, one case was a female, aged 72: a cart had passed over both legs, producing compound dislocation of one ankle, and simple dislocation with great contusion of the other. In the other cases, the severity of injury was so great that amputation afforded the only chance of recovery, but being objected to, excision of the articular surfaces was then resorted to under unfavourable circumstances.

In the after treatment of these cases, it is no uncommon occurrence for the first dressing, consisting of lint saturated in the patient's blood, to remain on until the wound is healed. I may mention one remarkable case, a compound dislocation of the ankle (the internal lateral) with much comminution of bone, in which twenty-five pieces of bone were taken out, varying in size from that of a small walnut to a small pea, and in which the first dressing remained on nearly nine weeks; when it fell off, the wound was found healed. The after treatment consists in damping the bandages in the neighbourhood of the first lint with any cool application, sometimes cold water or very weak spirit lotion, as the case may seem to require.

I may, perhaps, be permitted here to mention, that there is at present in the Infirmary, under the care of Mr. Bickersteth, a case in which excision of the whole elbow-joint was performed immediately on admission. The injury was a compound comminuted fracture of the joint produced by being crushed between the buffers of two railway carriages. It is ten weeks since the operation; the wound is nearly healed, the relative position of the fore-arm with the humerus having been maintained at an angle most conducive to utility afterwards.

In the lateral operations on the bladder with a view to remove foreign body or stone, and the operations for applying ligatures on large arteries in popliteal and subclavian aneurism, I have merely to observe, that I have several times operated for aneurism including the subclavian, and for the removal of stone or foreign body from the bladder by the lateral operation, but *have no death to record.*

At this stage of the record, as probably the case may never appear in any other form, I may probably be excused stating that I have lately performed the lateral operation on the bladder in a youth of twenty, for the removal of a pen-case rather more than three inches and three quarters in length, and having a diameter equal to number eleven of Weiss's catheter gauge. He was taken into the Infirmary on the 28th of October last, in a state of great emaciation, having experienced much suffering from the presence of the pen-case in the bladder six months. In the last three weeks he had been much reduced by diarrhœa and night sweats, added to which, there was a slough on the back about the size of the palm of the hand; the pen-

case had been introduced into the urethra by himself, and had soon slipped beyond his reach.

The operation was performed on the 31st of October, and his survival was considered doubtful. Some difficulty was experienced in extracting the pen-case, as it was fixed transversely across the bladder, with its ends resting laterally. It was encrusted with a deposit of the triple phosphate, having an accumulation at either end, giving a sensation to the finger of a bulbous expansion. The application of the forceps unfortunately separated the pen-case from the deposit, the bulbous portions of which were so adherent to the surface of the bladder, as to require repeated efforts of the finger to effect their separation. The quantity removed was sufficient to have formed a good-sized stone. Up to Friday, Nov. 24th, he had not had one untoward symptom. The diarrhœa and night sweats ceased at once, without the aid of medicine; in fact, his treatment, with the exception of an occasional slight laxative, has been solely dietetic: the wound was nearly closed, and the bulk of the urine passing naturally; but on that day (Friday) he had an epileptic seizure, which recurred several times until the following Sunday. Since then (Nov. 26th) he has not had any return, and is now passing urine naturally; the wound on the back cicatrizing. In short, he is nearly well, the epilepsy not appearing to have produced any drawback.

In the operations for strangulated bowel, in femoral, inguinal, and scrotal hernia, the deaths were *one in four*. This I consider an unusual degree of mortality, and is by no means to be taken as a criterion of the value of the operation. It is easily explained. The cases of death, with one exception, were varying in age from 71 to 81, a period of life in which feebleness of constitution is most likely to interfere with the necessary reparative process; the exception was 50, with the intestine gangrenous. In some of the other cases the intestine was gangrened, and all had suffered from irreducible protrusion several days; of course, submitted to the administration of "irritating injections" and "drastic purgatives," subjected to repeated attempts at reduction by the taxis, and only brought to the Infirmary as a last resource; the surgeons in attendance either declining to operate, or the patients unwilling to submit.

Still, one death in four, however great I may deem the mortality, is less than the average recorded as occurring elsewhere. Mr. Phillips says, "In the hospitals in Paris it is estimated that half of the patients who are operated upon for hernia die; in London I believe the results to be little more favourable*." My own experience leads me to believe the danger in hernia to be from delaying the operation. Mr. Phillips says, "I believe, in the present day, the operation for hernia has such unfavourable results because we wait too long, until, in fact, peritonitis is developed†." To this I cannot plead guilty. I have been obliged to operate on cases when they came to hand, however long the previous delay had been before they were brought to the Infirmary, and, as has been shewn, often under very untoward circumstances, where little hope was entertained of a favourable result; but in every case in which the opportunity was afforded of performing the operation early, the result was successful; and such is my experience of this operation, that were I the subject of strangulated hernia, I should prefer the operation at once, relying with perfect confidence on the result, to the risk attendant upon the delay and repeated attempts at reduction by the taxis.

Amputations, or removal of portions of bone, in the varied cases of compound fracture, with a view to save the limb.

Omitting all notice whatever of the cases of compound fracture which required only simple means to secure their favourable termination, and of those cases in which amputation of the limb was objected to by the patient, but which terminated unsuccessfully, the limbs being adjusted in the best manner the circumstances would admit of; this statement will only record those severe cases of compound fracture, in which amputation of the limb was not considered justifiable, but in which enlargement of the wound, and sawing off portions of the fractured fragments were deemed necessary either to the reduction or proper adjustment, by

* Med. Gaz. Oct. 9, 1840, p. 88.
† Ibid.

which a more safe and speedy cure might be accomplished. And here I find I cannot describe the varieties so perspicuously as I could wish, without deviating from my plan of not stating the number of operations. As, however, I think these, together with the class which is to follow, viz. the removal of tumors, do not come strictly under the denomination of capital operations, the deviation may not be thought material.

Of such cases I have to record, *thirty-five* of the leg, with *four* deaths.

Of the deaths, the first was a man aged 34, with compound fracture of the right leg, and simple fracture of the left thigh; he died on the fourth day, of effusion on the brain.

The second, a man aged 72, with compound fracture of the right thigh and left leg, occasioned by the fall of some balks of timber: he sank in sixteen days.

The third, a boy aged 12, with compound fracture of both legs, attended with great laceration of the soft parts, and comminution of the bones, occasioned by the passage of a railway carriage over them: he survived two days.

The fourth, a woman aged 72, with compound fracture of the leg, caused by falling into an open sewer: she died on the twenty-fifth day.

I have *four* cases of the thigh, of which *one* died. The case of death was a man aged 28, with compound fracture of the left thigh in the middle of the shaft, and a distinct compound comminuted fracture of the patella of the same limb, laying open the knee-joint, occasioned by a fall into a graving dock: he only lived two days.

One of the successful cases was so remarkable a one, that I shall not hesitate to introduce it here. A man, aged 40, with compound comminuted fracture of the patella, completely laying open the knee-joint: it was produced by the knee coming in contact with the tiring of a carriage-wheel, while in the act of being run away with by a horse he was riding. The patella was so smashed, that its entire removal was advised; this was done, with as much of the capsular ligament as possible; the wound was dressed with strips of lint covered with carded cotton, and the limb maintained in the extended position for three months, at the expiration of which the wound had healed without an untoward symptom. A fortnight afterwards he was discharged, provided with an instrument around the knee, so contrived with a spring as to preserve the limb extended, and yet admit of the flexor muscles bending the knee. I have seen him several times since walking in the town, and on one occasion without the instrument. When reproved for so doing, he explained it by saying the spring had broken: he was soon supplied with another, and I have now lost sight of him for a long time.

In this class I have included a successful operation for ununited simple fracture of the thigh. The operation of cutting down upon and turning out the ends of the fractured bone, proved a formidable one, and occupied a considerable time. He was discharged cured at the end of ten months, having previously, for more than three months, with the thigh secured in pasteboard splints, walked out on crutches in the Infirmary garden when the weather permitted.

I have *four* cases of the humerus, of which *one* died. The case of death was a man aged 35. The compound fracture was produced by a fall from a scaffold. He was carried off by an attack of erysipelas in the ninth week.

I have *seven* cases of the forearm and hand, of which *two* died. Of the deaths, one case, a man aged 58, with compound fracture of the radius, died at the end of eight weeks, exhausted with phlegmonous erysipelas, and sloughing of the back. The other, a man aged 34, with compound fracture of the radius near the wrist, occasioned by a fall from a cart while in a state of intoxication, was seized with tetanus on the seventh day, and died on the ninth.

Lastly, the removal of tumors. Of these operations I have had *twenty-five*, with *four* deaths. The operations include removal of scirrhus, osteo-sarcomatous and carcinomatous tumors from various parts of the body, as the face, head, neck, breast, back, loins, and thigh.

These results, when compared with the statistical reports already published, naturally lead one to inquire, how comes this great disparity in favour of the Liverpool Infirmary? And those persons acquainted with the localities will ask, can it be attributable to the

hospital, its situation, cleanliness, or ventilation?

As to its situation.—It is well known that the Liverpool Infirmary occupies a site which may be considered one of the most elevated in the town; the situation being open, the district, comparatively speaking, thinly populated, and the majority of the houses in the vicinity standing on a lower level than the building.

As to its cleanliness.—It has been the remark of visitors, that it is most clean; and some gentlemen on the management, who had expressly visited other hospitals, when an inquiry was instituted as to its ventilation, declared that no hospital they had seen was at all to compare with it in cleanliness.

As to its ventilation. — Such is the anxiety and watchfulness to keep the wards sweet, that it frequently interferes with the feelings of the patients, who are a class generally accustomed to close and ill-ventilated dwellings.

Again: has the locality of Liverpool any influence in contributing to this success? I believe an impression is now current very unfavourable to the salubrity of this neighbourhood, entirely from an erroneous view having been taken of a pamphlet, On the Physical Causes of the high rate of Mortality in Liverpool, by Dr. Duncan; a more appropriate title for which would have been, on the physical causes of the high rate of mortality *in particular districts* of Liverpool; for this is all that has been proved. He certainly has not refuted the "prevalent impression," which led Dr. Dobson, one of the physicians to the infirmary, a building at that period situated at the top of Shawsbrow, then one of the most elevated and open parts of the town, and but thinly populated—such was at that time the wisdom and care manifested by the founders in the selection of a site, and equally displayed by their successors in the choice of the situation of the present infirmary—to write in 1774, "Liverpool is one of the healthiest places in the kingdom in proportion to the number of the inhabitants; or Mr. Moss, in his Medical Survey of Liverpool, published ten years later, to say, "the air is much more pure than is commonly found in many parts of the kingdom." "Liverpool may truly be said to be a healthful town, and that much more so than the generality of towns in the kingdom in proportion to their amplitudes*." But since then, a Liverpool medical journal, in 1834, has spoken of "the general character of the town for healthiness;" and, as Dr. Duncan says, "various good geological reasons were assigned to account for it." And I question very much whether the complaints made against him, as he says, by "the public authorities" here were not just, when "they stigmatised some evidence given by him before a committee of the House of Commons on the health of towns, on the high rate of mortality in Liverpool, as a foul and unmerited libel on the good old town."

His evidence ought to have been confined to the high rate of mortality *in particular districts* of Liverpool, not of the town in general; for on that it will not bear, as is proved not only by his own tables, but I think my results of operations; and the comparisons which follow may be fairly taken in as an additional criterion of the value of such generalising.

Compare his own expressions when drawing a contrast of the wards of the town. He says, "not the least striking result of the investigation is the very different rate of mortality which we have found going on in the various districts of the town; for while in Rodney Street and Abercromby Wards," (in the elevated part of which the Infirmary is situated) "with upwards of 30,000 inhabitants, the mortality is below that of Birmingham, the most favoured in this respect of the large towns of England; in Vauxhall ward, with a nearly equal amount of population, the mortality exceeds that which prevails in tropical regions†."

This may be considered the *most* striking result of the investigation, and is not a little confirmed by what follows. He says, "does any one suppose that if the inhabitants of Rodney Street and Abercromby Square were to exchange places with those of Vauxhall or Exchange wards, leaving their spacious mansions to be occupied by the inhabitants of the latter district, while they took up their residence in the filthy and miserable courts and cellars of Vauxhall or Exchange—their relative command of the necessaries of life remaining undisturbed—does any one

* Dr. Duncan's Pamphlet, page 7.
† Ibid. p. 60.

suppose that the relative mortality of the two classes would likewise remain unaltered? that 1 in 23 would still die in Rodney Street, and not more than 1 in 41 in Vauxhall? or that the average duration of life would not be prolonged beyond 15 years among the former inhabitants of Vauxhall, and fall far below 35 years among the present occupants of Rodney Street?"*

Does this refute the statements of Dr. Dobson, Mr. Moss, and the Liverpool Medical Journal, as quoted by himself at the seventh page, and which he sets off with, resolved to overturn? Does it not rather confirm, not only the printed records of the health of the town, but the justness of the "prevalent impression" of the salubrity of the neighbourhood?

It happens, however, that there is now a fancy abroad against the health of the town, entirely owing to Dr. Duncan's pamphlet, which I trust the close and consistent reasoning of thinking men may yet dispel. I think great credit is due to him for having drawn attention to the abominations of some districts of the town, with a view to their removal, but that the conclusions which are drawn with respect to the general healthiness of the town are borne out even by his own tables, I must object.

Does it speak much for the acumen of the Liverpool Literary and Philosophical Society, who have published the pamphlet? Ought they not to have been the guardians of the character and interests of Liverpool, and not have been the means of circulating what has operated unjustly to the disadvantage of the town?

In my thirty years' knowledge of Liverpool, I can safely say the natives with whom I have been acquainted, or who have come under my observation as prominent persons in the town, attain a good old age. I have at this moment in view one gentleman whom I occasionally meet, who is nearly 90. Another upwards of eighty, who is more active than many persons at half his age. But that the general healthiness of Liverpool is to be denounced because the general bill of mortality is swollen with the deaths of such sick poor as come here with already impaired constitutions and inherent maladies, to be developed by a residence in the particular districts described, is most unfair.

That this great mortality in particular districts is a monster evil, demanding the prompt interference of the local authorities, no one can doubt. Let the Corporation set the example. They are trustees for the public good; let them prove themselves conservators of the public health. They have already expended thousands upon thousands in contesting their right to the conservancy of the river; let them apply an equal zeal and energy to the conservancy of the health of the town, and let not the plea of a want of funds stop the good undertaking.

The conclusion at which I arrive after a perusal of the tables is, that we are not to infer that the locality of Liverpool is unhealthy; but that the atmosphere in particular districts of the town is very much deteriorated by the construction of the dwellings, the close manner in which the inmates are packed, "in some instances *thirty* human beings sleeping in a space furnished with a supply of air sufficient for the wants of only *seven*, and each inhaling the poison which his neighbour generates*;" and the filthy habits of the population, they being chiefly low Irish, "as well as vagrants and vagabonds of all descriptions†."

That these should produce their usual results of fever and death is not to be wondered at; the surprise would be did they not; but I believe such a combination of ill ventilated dwellings, crowded population, and filthy habits, would produce these results in any locality. And, that the state of atmosphere generated from such sources does operate to the disadvantage of those particular districts of the town, is pretty clearly manifest, if we contrast the published results of amputations performed on cases in a small hospital, containing about fifty surgical beds, at the north part of the town, with what I have laid before the profession.‡

Before entering on the comparison, I must state, that I cannot acquiesce in the feeling which dictated to Mr. Phillips a determination to withhold the names of several hospitals included in the returns made to him, because "in

* Ibid. p. 62.

* Dr. Duncan's Pamphlet, p. 18.
† Ibid.
‡ MEDICAL GAZETTE, May 7, 1841, p. 269.

certain hospitals the mortality after amputation had exceeded fifty three per cent. 'in several not exceeded twelve per cent. and in one of the number, out of twenty amputations there being only one fatal result."*

What! in the face of such frightful mortality as is represented, a mortality so annihilating as almost to raise a question as to the value of operations at all, are we to exercise any reserve? I think this delicacy has lessened the value of his deductions, and he has rejected a most valuable clue to the causes of such mortality. This, however, must become a most important part of the inquiry.

The results of the comparison will be as follow; and as my chief field of operation has been the Infirmary, I shall class my results in its name, though I believe it will suffer by it.

INFIRMARY.	NORTHERN HOSPITAL.
Amputations above the knee, one death in eleven.	Amputations above the knee, one death in five. Deaths more than double†.
Below the knee, one death in six.	Below the knee, one in less than $3\frac{1}{2}$. Deaths nearly double‡.

As I have no death after amputation of the fore-arm, I cannot follow out the comparison otherwise than by combining the amputations above and below the elbow, thus :—

Of the arm, one death in eighteen.	Of the arm, about one in $3\frac{1}{4}$. Deaths more than five times greater§.

To satisfy the reader my inference is fair, that the Infirmary has been the sufferer by my classing my results in its name, I will quote from its eighty-seventh printed annual report, in which there is a brief statement of operations during two years, the only general record which can be got at, which I greatly lament, for I am satisfied, and it is no "vague impression," could a general record be obtained for the period of nearly eighteen years I have been associated with it as surgeon, a still more favourable result could be shewn.

"Amputations of upper extremities, including one of the shoulder-joint 20, of which 1 died.
Amputations of lower extremities, three individuals lost two legs each 23, of which 2 died‖."

	43	3

So that there were only 3 deaths in 43 amputations. One in $14\frac{1}{3}$.

Whereas, if we take the published report of the Northern Hospital for seven years, what do we learn—

"Amputations of upper extremities . .	16, of which	5 died.
Amputations of lower extremities . .	57, of which	15 died.
	73	20¶. "

And that there were 20 deaths in 73 amputations, or one in $3\frac{1}{2}$.

Those are startling comparisons! and for which I was wholly unprepared. It is only within a few days that my attention has been called to the statement of the Northern Hospital, or I should have felt bound to draw the contrast sooner, rather than quietly have allowed an impression, so unfavourable to Liverpool operative surgery, to pass uncontradicted. I conclude it to be correct, as it bears the impress of authority, the communication to the Editor of the London Medical Gazette, having the signature Edward Parker, M.R.C.S.E. assistant house-surgeon to the hospital. How far he has been warranted in forming such a general conclusion as his first, viz. "that amputation is a more dangerous operation than is generally supposed, the proportion of fatal cases being one in $3\frac{13}{20}$," I leave the profession to judge.

But to resume the comparison.

Located on the margin of the canal basins, near what was the bank of the river, called the north shore, but now a dock, not much above the level of high water-mark, in one of the most densely crowded districts of the town,

* Medical Gazette, June 9, 1838, p. 459.
† Medical Gazette, May 7, 1841, p. 270.
‡ Ib.
§ Ib.
‖ 87th Printed Report of the Liverpool Infirmary for the year from January 1835, to January 1836.
¶ Medical Gazette, May 7, 1841, p. 270.

itself constructed out of two private dwellings, the Northern Hospital is almost surrounded by lofty warehouses.

In comparing these results, is it irrational to infer that the situation of the hospitals has had something to do with the diversity of success?

Entering a little more closely into the comparison, what is the picture?

The Infirmary is situated in "Abercromby Ward, where fever prevails the *least*, only 1 in 237 of the inhabitants having been attended by the dispensaries, and where there is also the *smallest* proportion of the population, between one-fourth and one fifth-resident in courts and cellars; where the proportion of deaths from *all* causes is 1 to 41½, a mortality *below* that of Birmingham, the *most favoured* in this respect of the large towns of England*."

The Northern Hospital is situated in Vauxhall ward, "the *worst* in point of mortality, the deaths amounting to 1 in 23½, the mortality *exceeding* that which prevails in tropical regions; where the *largest* proportion, more than one half, of the population reside in courts or cellars, with the most defective sewerage, and in which fever is *most* prevalent, 1 in 27 of the inhabitants having been annually attended by the dispensaries alone.†"

The comparison being complete, I may perhaps be excused entering briefly into the history of the Northern Hospital. It was established upon what, to a superficial observer, appeared a very humane argument, viz. that the distance from the docks to the Infirmary being about a mile, the accidents occurring in that locality suffered so much from delay in the removal, that it was desirable to bring a hospital to them: this was done by the conversion of a private dwelling, to which in course of time another was added. But the promoters of this humane project forgot their principle in their election of surgeons: three were appointed, whose private residences equalled, if they did not exceed in distance, that which had been condemned as prejudicial. Of course the severe accidents requiring amputation, and other treatment which the surgeons only could execute, had to wait until they were obtained, and after that delay, had in the struggle for recovery (under the best circumstances difficult) to contend with all the disadvantages of the locality, the result of which, as published by the assistant-house surgeon, is sufficiently manifest.

This is a subject which must ere long force itself upon the attention of all founders and governors of hospitals, and demand their serious consideration; it seems generally to have been overlooked, and a really humane anxiety to embrace every advantage which could possibly contribute to render hospitals what they profess to be, to have been set aside by an eagerness to follow out particular views, or forward individual interests. Certainly, the published statement of results of amputations at the Northern Hospital has furnished the strongest argument that could have been adduced against the establishment of a hospital in such a locality.

To the clear unprejudiced judgment of the truly benevolent, the remedy is obvious; but to those whose philanthropy may be alloyed by inferior considerations, it would be vain to suggest it.

* Dr. Duncan's Pamphlet, p. 45.
† Ibid.

SOME OBSERVATIONS ON EXANTHEMATOUS, OR SCARLATINAL DROPSY.

By John Thomas Nicholson Lipscomb,
Member of the Royal College of Surgeons.

(For the Medical Gazette.)

The importance of that form of dropsy which succeeds to scarlatina, has been variously estimated by different authors. Morton, the first English physician who gave an account of it, evidently regarded it as a disease of no slight importance; and Plenciz, who wrote a description of the scarlatina, as it prevailed epidemically at Vienna, in the middle of the eighteenth century, speaks of it as more dangerous than the primary fever; whilst Cullen, Armstrong, Lewins, and others, make but a bare mention of it in their works; and Sydenham, that excellent physician and accurate observer, does not even allude to it. It has, however, since Dr. Bright has made known to us the connection existing between albuminous urine and structural disease of the kidney, claimed a greater share of the

attention of the profession; and its true pathological condition begins now to be better understood.

It was considered by Dr. Withering to succeed chiefly to the malignant species of scarlet fever; though he admits, with Dr. Percival, that it is occasionally to be met with after its more mild forms: later observations, however, have shown that dropsical effusion is most frequent when the primary fever has been trivial; not so much, perhaps, because the primary fever was slight, but because, being slight, it attracted but little attention; and hence the patient had not that care to avoid exposure to cold, that would have been given had the disease been more severe.

Neither sex nor age are exempt from it, though it is much less frequent in advanced than early life; probably from the greater delicacy and susceptibility of the skin during childhood, and the greater frequency of scarlatina at that time. It generally commences its attack at a period varying from one to two or three weeks after the decline of the fever, though occasionally not till later. A case is on record in which five weeks intervened; and Dr. Gull, of Guy's Hospital, met with one in which the patient did not apply to him until a year after the attack; the dropsy, if there had been any, not attracting attention until that time. It is preceded for the most part by peevishness, general languor and debility, restlessness, dyspnœa, a leuco-phlegmatic countenance, the face sometimes flushed, skin hot and dry, nausea, vomiting, loss of appetite, a white furred tongue, constipated bowels, scanty turbid and high coloured urine, somewhat bloody in appearance, and accompanied with a lateritious deposit; after which the face and upper extremities begin to swell, and anasarca makes its appearance, generally in the face first, though I have in some instances detected it in the fore-part of the legs when it was not observable in any other parts of the body*. From the face it gradually extends to the extremities, abdomen, and scrotum. The pulse is quick, weak, and jerking; there is distressing vomiting, disturbed sleep, and great cerebral excitement, accompanied with convulsions. Not unfrequently, if the disease be allowed to continue its course unchecked, effusion rapidly takes place into the great serous cavities, when the symptoms of either hydrocephalus or ascites manifest themselves; and if not relieved, speedily prove fatal. From the commencement of the dropsy, albumen may, in almost* every case, be detected in the urine, by gently applying heat to it in a glass test tube. Nitric acid should always be added, to distinguish albumen from the earthy phosphates: and here I would recommend, that in all cases of recovery from scarlet fever, the urine be frequently and accurately tested, that the slightest trace of albumen may be detected as early as it occurs.

However true Sydenham's remark, "æger non raro multâ aliâ de causâ, quam nimiâ medici diligentiâ ad plures migrat," may be with respect to scarlatina, it is certainly not applicable to the disease now under consideration, for though I believe that if attention be early drawn to the condition of the patient this disease will seldom prove fatal; that warm clothing with flannel worn next the skin, the avoiding the least degree of cold and damp, together with the daily exhibition of a brisk purgative, and a moderate non-stimulating diet, will frequently be found sufficient to effect a cure; yet, if the disease have advanced beyond this, the first stage, if the anarsarca be general and considerable, and if the urine deposit a large quantity of albumen on the application of heat, a more strict restraint will be absolutely necessary: the patient should be confined to his bed; the room be kept warm, and of equable temperature; and diaphoretics, such as the Liq. Ammon. Acet., ipecacuanha and antimony wines, be administered in combination with the Tinct. Digitalis† every four or five hours; and a purgative, say the compound jalap powder, which I regard as one of the best, be given every morning. The exhibition, too, of a warm bath every, or every other night, will materially tend to produce diaphoresis. Should, however, these means fail, should the pulse be

* Dr. Blackall, of Exeter, bears testimony to the same fact.

* Drs. Abercromby and Blackall each mention a case in which the urine was not albuminous; but all those that I have had opportunity of investigating have contained serum.

† Dr. Blackall says digitalis is the sovereign remedy: I know of no instance where it has failed when properly exhibited.

quick, hard, and incompressible, and the patient complain of pain in the loins, it will be found desirable to deplete locally, by the application of a cupping glass or leeches over the loins; or in some cases, particularly if there be much difficulty of breathing, to abstract blood from the arm; regard of course being paid to the age and strength of the patient*. Mercury should only be given to aid the action of cathartics.

In the above remarks, it will be observed, I have made no special allusion to the employment of diuretics. Those of a stimulating character I regard as decidedly prejudicial; but the more cool and attenuating, and those which diminish inflammatory action, *e. g.* neutral salts and digitalis, may often be of advantage, though, when the urine contains serum, I give the preference to those medicines which determine to the skin, rather than run the risk of over stimulating an organ which is already in a state at least of congestion from increased action. I am, however, aware it may be urged that diuretics do not increase the quantity of albumen present.

The following cases, which have all occurred to me during the late autumn, when scarlatina and its sequelæ were both prevalent and fatal in this neighbourhood, may perhaps serve to elucidate the preceding observations. Case the first shows that albumen may occasionally be detected in the urine after scarlatina, before œdema of the body is observable; and that the disease, when once apparently removed, if not entirely eradicated, is liable to relapse.

Case the third, the only one that fell under my observation in which the patient died, gave me an opportunity of examining the pathological conditions of the different organs, which I have briefly reported.

In case the fifth it is worthy of remark, how rapidly the water disappeared after the child had accidentally vomited. This result, which has been observed by others, has induced them to recommend the employment of emetics in similar cases. The blue powder, prescribed on the 1st October, was administered with the view of improving the character of the alvine evacuations, and was not intended to act upon the general system.

In case the sixth, I could not detect any anarsaca: possibly effusion had dot taken place, and was prevented by early treatment.

Case I.—F. H. æt. 5, had scarlatina in 1843; soon afterwards the urine became slightly coagulable by heat; for which he took a compound jalap powder every morning. In a few days the albumen was removed, and the urine became healthy; he then ceased taking medicine. After the lapse of a few more days, I again submitted his urine to the application of heat; and found that it again deposited albumen. I could now, for the first time, by careful examination, detect a slight pitting on the lower extremities: he was treated with the Liq. Ammon. Acet., antimony, and ipecacuanha wines three times a day, and a compound jalap powder every morning. In the course of two more days, the urine was once more free from albumen. The boy continued well.

Case II.—M. C. æt. 8, on the 20th August last, was seized with the ordinary precursory symptoms of scarlet fever, and on the next or following day the rash made its appearance, and ran through a very irregular course, disappearing, and again reappearing, accompanied with considerable cerebral excitement; for which local depletion, by means of leeches, was had recourse to on two different occasions. On the 5th Septembor the face and legs became œdematous; the urine was scanty and pale, depositing a small sediment on the application of heat.

> To take a small dose of blue pill at bedtime, and comp. jalap powder each following morning. Flannel to be worn next the skin.

After this the legs continued œdematous; and the urine deposited the same quantity of albumen on the application of heat. A mixture of Liq. Ammon. Acet. antimony and ipecacuanha wines, was prescribed with fifteen grains of comp. jalap powder every morning; from which time the patient gradually recovered, and on 10th inst. the urine remained unchanged on the application of heat.

This patient complained of no pain of uneasiness from the succession of the dropsy; slight pitting of the lower

* Dr. Lewins, of Haddington, thinks that bleeding ought always to be had recourse to when the mild remedies recommended by Dr. Cullen fail.

extremities, and albuminous urine, were the only bad symptoms.

Case III.—G. S. æt. 4, on the 7th August, 1843, complained of headache, sore throat, &c. On the 9th the body was covered with a scarlet rash, which disappeared on the 15th. Some days afterwards, near upon a fortnight, the child had thirst; heat of skin; headache; palpitation; restlessness; dyspnœa; the bowels were open; stools of a pale colour; urnie scanty and high coloured, or rather having a dull leaden hue; great inclination to the horizontal posture, and the left side; dyspnœa increased by lying down; almost constant nausea, accompanied with occasional vomiting.

The above symptoms were elicited from the mother, who requested me on the afternoon of the 5th September to see him. I found him almost moribund: there was general anasarca; an enlarged abdomen; distressing dyspnœa; great sickness, and he was totally unable to take anything; urine was strongly coagulable by heat and nitric acid. The child died at 10 P.M.

Autopsy 35 hours after death.—The whole body was very œdematous; there were large quantities of serum in the cavities of the chest and abdomen; no flocculi floating in it. The lungs were healthy; heart perhaps somewhat pale, otherwise healthy; peritoneal coat of liver opaque; spleen natural. The kidneys indicated an early stage of Bright's disease: they were large, weighing 3½ oz. each, much congested; the cortical layer thickened, and projecting into the substance of the organ, between and greatly compressing the tubuli miniferi. Upon removing the fibrous coat, the surface was mottled as though from the deposition of lymph.

The head was not examined.

Case IV.—R. P. æt. 11, was seized, on the 20th August, 1843, with pyrexia, sore throat, headache, &c. which were followed by a scarlet eruption over the whole body. She was not, however, sufficiently ill to lie by, or apply for medical relief; about a week afterwards, she complained of a degree of languor; her face appeared puffy, the abdomen became large, and her legs swelled, particularly towards night. On the 7th September I was applied to, and found her, although not entirely free from constitutional symptoms, yet suffering but little from them; there was no pain; the urine was scanty, of a deep red colour, and moderately coagulable by heat. I prescribed calomel and compound antimony powder every night, and a compound jalap powder each following morning. Under this treatment she did not seem to improve: the œdema was not at all diminished.

Ordered to be clothed in flannel, and to be kept in a warm apartment.

℞ Liq. Ammon. Acet. ʒij.; Vini. Ant. P. Tart. Vini. Ipecacuanhæ, aa. ʒiss.; Syrup Aurant. ʒij.; Aquæ. Destill. ʒiiiss. M. cap. cochl. i. magn. ter quotidie.

In a day or two she began to mend; the quantity of albumen present in the urine gradually decreased, and on the 21st. inst. she was considered convalescent.

Case V.—Thomas ——, æt. 7, was attacked with sore-throat, headache, &c. on the 1st September: on the following day an eruption of a bright scarlet colour made its appearance. No medical attendance. On the 7th September, when I first saw him, the exanthematous rash had disappeared. Face was somewhat puffy, abdomen enlarged, and there was slight pitting down the fore part of the legs. Urine natural as to quantity, but pale and turbid. Upon examining it with heat I could detect a very minute trace only of albumen.

℞ Hydr. Chloridi, gr. iss.; Pulv. Jalapæ co. gr. ij. ft. Pulv. om. nocte; Pulv. Jalapæ co. gr. xx. om. mane.

After continuing this for a few days the œdema became diminished, so that the pitting on the legs was scarcely perceptible; but in consequence of exposure to cold he relapsed, and on the 16th inst. the swelling over the whole body was much increased.

To be clothed in flannel, and to take a mixture of the Liq. Ammon. Acet. Antimony and Ipecacuanha wines, three times a day, and a Comp. Jalap Powder every morning.

On the 19th, the œdema was so much increased that the eyes were nearly closed, and he was totally unable to button his clothes. The urine, which before deposited but little sediment on the application of heat, is now moderately coagulable.

Continue the same medicines in increased doses, and administer a warm bath every night.

From this time the patient improved

until the 23d inst. when he complained of pain across the loins. The skin was hot and dry; the pulse full, hard, and frequent; cough and dyspnœa.

Sanguis detrahatur è Brachio ad ʒij.; Rep. Medicamenta.

On the following day the swelling was still further increased, the scrotum being enormously distended. The blood evinced neither a buffed nor cupped appearance, but was florid, and had a full share of crassamentum. The last medicines produced nausea.

Rep. Medicamenta.

The scrotum was scarified, and a very large quantity of serum gradually oozed out.

25th.—All the symptoms augmented; extremities cold; pulse quick and intermitting. Ascites and general hydrothorax to a considerable extent. Child can only keep the semi-erect posture, on account of the urgency of dyspnœa. Bowels not freely acted upon; last few motions were dark coloured.

Ordered heated bran to the extremities, a powder of calomel and antimony directly, and an aperient an hour after.

After this the child vomited, when the ascites and part of the anasarca suddenly disappeared, and the scrotum returned to its natural size.

27th.—Nausea still continues.

An aperient powder to be taken directly, and an effervescing saline draught with ♏viij. Tinct. digitalis every three or four hours.

Oct. 1.—Gradual improvement has taken place since last report. The nausea, which was entirely removed by the effervescing medicine, has again returned, accompanied with a disinclination for food, and vomiting, principally mucus tinged with blood, on taking any thing into the stomach; urine turbid, and very deep coloured, of a bloody appearance, still albuminous, though much less so than before. Pulse feeble; bowels somewhat costive; motions offensive; tongue furred.

℞ Magn. Carb. ʒss.; Acidi Hydrocyan. ♏ix.: Aq. Cinnam. ʒvj.; Aq. Destillat. ʒii. 3ii. M. Cap. Cochl. i. Magn. ter quotidie.

℞ Hydr. c. Cretâ; Sodæ Sesq. Carb.; Pulv. Rhei. aa. 3iij. M. ft. Pulv. ter in die sumend. ex avenâ. To be continued for two days.

4th.—Vomiting ceased after taking the first dose of the acid. Child not so well to-day, from having taken cold; the dyspnœa is more urgent, and accompanied with a short hacking cough. He is now, and has been for many hours, in a profuse perspiration.

℞ Potass. Nitrat. ℈ij.; Pulv. Trag. co. ʒss.; Vin. Ipecac. ℈ij.; Aq. Cinnam. ʒiv.; Aq. Destillat. ʒiiss. M. Cap. Cochl. i. magna quartâ q. q. horâ.

16th.—Convalescent.

Case VI.—T. N. æt. 4, was attacked with scarlatina in the middle of August last, which ran its course very irregularly, the eruption making its appearance, and soon disappearing. The brain, too, was much affected. On the 15th Sept. upon examining the urine, I for the first time detected the presence of albumen. Flannel next the skin was prescribed, and the child took the ordinary mixture of Liq. Ammon. Acet. Antimony and Ipecacuanha wines, three times in the day, and a compound jalap powder every morning. This treatment was persevered in till the 20th inst. when the urine was again examined, and remained unchanged upon the application of heat.

St. Albans, Dec. 4, 1843.

A CASE OF UNUSUAL DISLOCATION OF THE HIP,

REDUCED BY A NEW (?) METHOD; WITH REMARKS.

By John Davies, M.D.
Surgeon to the General Infirmary at Hertford, &c. &c. &c.

(*For the Medical Gazette.*)

John Hart, aged 20 years, of middling habit of body, was admitted at the General Infirmary, under my care, on the 14th November ult., with a dislocation of the head of the left femur into the obturator foramen. The accident had occurred on the 12th, two days previous to his admission. Considerable force had been used by the medical man who had been first called to the case, and, according to the patient's account, a large quantity of blood had been abstracted; but he could not succeed in reducing the bone.

After the patient's admission into the infirmary, the usual method of reduction was put in execution, namely, that of using extension on the dislocated limb across the opposite one, and of an

attempt to elevate the head of the bone from its false position; but this plan did not succeed, although persevered in for a long time with considerable force. The other mode, recommended by Sir A. Cooper for dislocation into the foramen ovale of three or four weeks' standing, was then adopted. The patient was placed on his back, and his pelvis fixed by a round towel to the bedstead. A padded strap was then placed round the upper part of the dislocated limb: to this strap the pullies were attached, so as to direct the force outwards, at a right angle with the body. This plan caused the removal of the head of the bone from the obturator foramen in the course of two or three minutes, and its reduction into the acetabulum took place with a loud "snap." It was supposed at the time that the head of the bone was left in the socket, but I have a strong suspicion that it passed over at the same moment to the ischiatic notch. Sir A. Cooper, in his work on Dislocations and Fractures, speaking of the reduction of the head of the bone from the foramen ovale, according to the plan just described, says, that "great care must be taken not to advance the leg in any considerable degree, otherwise the head of the thigh-bone will be forced behind the acetabulum into the ischiatic notch, *from whence it cannot be afterwards reduced.*" I feel pretty certain that I did not let go the lever at the moment the head of the bone "snapped" into the socket, and that, consequently, it was thrown out again, over the outer rim of the acetabulum, into another false position.

On examining the hip minutely on the 24th of the same month, the swelling having in a great measure subsided, I discovered that all was not right. The great trochanter was farther back, and rather lower, than it ought to be when in its natural position: the toes turned a little inwards, and the knee was nearly an inch lower than the opposite one. In fact, I discovered that the head of the femur was situated in the lesser sacro-ischiatic notch, resting immediately under the spine of the ischium.

The usual course of extension recommended for dislocation into the ischiatic notch was adopted. The patient was placed on his right (sound) side, with his pelvis fixed by a padded strap passing between the pudendum and the dislocated limb, and fastened to the bedstead. The pullies were attached to another strap, buckled round the limb immediately above the knee, and extension was made across the opposite thigh, nearly at a right angle with the body, while an attempt was made with great force to elevate the head of the femur from its mal-position. These efforts were persevered in for a considerable time, but without the slightest appearance of success.

Taking into consideration the nature of the case, with the relative positions of the parts concerned, I was induced to adopt the following method. The patient was placed on his right side—the sound side: a broad towel was applied round his pelvis, so as to fix it firmly to the bedstead: a padded strap was placed round the dislocated limb, as high as possible; to this strap one end of the pullies was hooked, and the other end was fixed at some distance in front of the patient, so as to apply the force on the upper part of the thigh, forward, at a right angle with the body. Whilst the pullies were acting, an assistant had hold of the lower part of the limb, so as to use it as a lever, by gradually and gently pulling it backward, and rotating it slightly outward. At the same time I pushed the great trochanter forward. In about one minute the head of the bone was reduced into its socket.

The force required to move the head of the bone from its mal-position, by this plan, appeared very slight; for the pullies had scarcely commenced to act when I could distinctly feel it glide gently forward towards the acetabulum, into which it entered with great apparent ease, without any "snap" or noise.

The patient has been doing very well since, and is now going about upon crutches. He can move the limb very well.

The great, of all great authorities, Sir Astley Cooper, says, "I have seen no instance of a dislocation (of the hip) downwards and backwards. . . . I may be allowed to observe, that, if such a case ever does occur, it must be extremely rare."

There can be no doubt about the nature of the dislocation in this case, that it was backwards and downwards

to some extent: in fact, it was a dislocation of the head of the femur into the lesser ischiatic notch. But, on the other hand, there is, in my opinion, as little doubt that it was not the result of accident, but was caused by the action of the pullies, in reducing the previous dislocation from the foramen ovale. It may be a question whether any kind of casual injury—a blow or fall—can throw the head of the bone into the position in which it was placed in this case.

We might infer, from Sir A. Cooper's remark, that it is not unusual for the head of the bone to slip over the acetabulum into the ischiatic notch, in the attempt to reduce dislocation from the foramen obturatorium, according to the method adopted in the present case; for, he says, as already quoted, "great care must be taken not to advance the leg in any considerable degree, otherwise the head of the thigh-bone will be forced behind the acetabulum, into the ischiatic notch;" and, he adds, "from whence it cannot be afterwards reduced."

Now, as Sir Astley says that he, in all his extensive practice, had never seen a case of dislocation backwards and downwards, the above remarks must apply to dislocation into the upper or greater ischiatic notch. Yet one might suppose, from an examination of the skeleton, considering the relative situations of the foramen ovale, the acetabulum, and the upper and lower ischiatic foramina, that the last named is the one most likely to receive the head of the bone, if it should be drawn across the acetabulum by a force applied for the reduction of dislocation into the obturator hole, as used in this case, and as recommended by Sir Astley himself in cases of dislocation of long standing. It is evident that Sir A. Cooper did not intend that his expression should be taken according to the strict interpretation of its terms, when he remarks respecting the head of the bone slipping into the "ischiatic notch, from whence it cannot be afterwards reduced;" because no one knew better than he that cases of dislocation into that position had been reduced. His object in that expression is to caution surgeons against transferring the head of the bone into the ischiatic notch on its removal from the foramen ovale, by impressing upon them the difficulty not the impossibility, of reducing it from that situation into its natural bed.

Having succeeded with such facility in bringing the head of the bone forward into the acetabulum by the plan adopted in the present case, it may be inferred that the same method would prove successful in similar cases. In the heading of this article I introduce the mark of interrogation after the word "new." It is very possible that my more learned brethren may be able to quote cases treated in a similar manner; but I can find no mention of such either in systematic works on surgery, or in those specially applying to dislocations.

The reason appears tolerably clear why the usual method adopted for the reduction of dislocation of the head of the femur into the ischiatic notch is attended with so much difficulty. Most of the force used in the extension of the limb, as well as that applied to the elevation of the upper part of the bone, is lost. The force produced by the pullies is counterbalanced by the resistance caused by the fascia, or strap which is used for fixing the pelvis. With the exception of the weight of the patient's body, the amount of the one force is pretty nearly equal to that of the other; for the band applied between the pudendum and the dislocated limb does not act directly upon the pelvis, but upon the upper part of the thigh, through the medium of the muscles; and when we consider the position and attachments of these muscles, we may well understand how the resistance of the strap must nearly counterbalance the force of the pullies.

The resistance of the strap, also, will almost bid defiance to any effort to lift the head of the bone from the ischiatic notch; for it tends to pull the upper part of the limb outward, whereas the course in which it ought to move, in order to get into the acetabulum, ought to be inward.

I may remark, likewise, in conclusion, that in dislocation into the foramen ovale, a similar objection applies to the usual mode of reduction. The strap or band which fixes the pelvis acts more and more powerfully in pressing the head of the bone, so as to retain it in the obturator hole the more the force of the pullies is made to in-

crease; whereas by using the strap as a fulcrum, as near the head of the bone as it can be applied, and by acting on the lower part of the limb as a lever, a reduction will probably be easily accomplished, if of recent date.

Hertford, Dec. 8, 1843.

DIAGNOSIS OF FRACTURES OF THE LOWER END OF THE RADIUS.

To the Editor of the Medical Gazette.

Sir,

There are one or two points connected with fractures of the lower end of the radius, which, I think, deserve more attention than has hitherto been paid to them, as diagnostic symptoms of this particular kind of injury: I refer to the prominent ulna, and peculiar displacement of the hand, which is met with in these cases.

When the radius is fractured within its lower inch, or inch and a half, by a fall on the hand, it will be found that, in the majority of cases, the following deformity exists:—The whole hand appears to be displaced laterally outwards, or in a state of abduction; that is to say, the ulnar edge of it, instead of being in a line with the ulna itself, occupies a position more external, or towards the radius, which causes the end of the ulna to project, and to be apparently dislocated. There is also generally found to be a depression on the opposite side, in the radius itself, in the situation of the fracture; and there is not unfrequently a prominence posteriorly above the carpus, when the displacement has taken place in this direction as well. The crepitus is not often present in these cases, for the fractured surfaces are so tightly locked together, that motion between them is seldom obtained.

The explanation of the above position of the hand no doubt is the following. When a person falls on the hand with sufficient violence to fracture the radius, the force, after it has produced the fracture, tells upon the lower portion of bone, and pushes it inwards towards the ulna, at the same time that it must take the wrist and hand with it, owing to its mode of connection with the carpus. The ulnar edge of the hand then loses its normal position with the ulna, causing the end of this bone to stand out in so prominent and decided a manner. It is to these two latter symptoms that I attach so much importance, as being diagnostic of this particular kind of fracture; for I believe that in every case of injury about the wrist, from a fall upon the hand (whether in old or young people, though more frequently in the former), where there are found to be *this peculiar prominence of the ulna, and lateral displacement of the hand*, it may safely be said, that the lower end of the radius has been fractured, without the necessity of taking any other symptoms to help the diagnosis, even if no deformity is to be felt about the radius itself, or other part of the joint. I have come to the above conclusion after close observation and much attention to the subject, and believe them to be *sure diagnostic symptoms* of fracture of the lower end of the radius.

I have referred to this point in my work on Fractures, since which I have seen so many cases confirmatory of it, that I am induced to trouble you with these few remarks, in the hope that you may think them important enough to occupy a space in your valuable journal.—I remain, sir,

Your obedient servant,

Edward F. Lonsdale.

82, Guildford Street,
Dec. 9, 1843.

ACUTE LARYNGITIS.

To the Editor of the Medical Gazette.

Sir,

The accompanying brief notes of a case of uncomplicated acute laryngitis are at your service, if you consider them deserving of a column in your valuable periodical. It seems desirable that cases of acute laryngitis should be accumulated. In the following case the good effect of general blood-letting was remarkable; and to this alone I attribute its satisfactory termination; not that I would in any case of acute inflammatory action omit to produce ptyalism as speedily as possible. Of the means employed, the most important of which I have noted, as venesection, mercury, leeches, blisters; and others not noted, as saline mixture, with digitalis, hydrocyanic acid, diaphoretic doses of antimonial wine, nitre, and syrup of poppy, besides pills of extract

of henbane, and Dover's powder at bed-time, none seemed to be of any avail except the general blood-letting. With respect to the cause of the attack, its explanation appears easy, in the plethoric habit of the patient, the prevalence of cold damp weather, and residence on the banks of a (at that time flooded) river.—I am, sir,

Your obedient servant,

JOSEPH THOMAS, M.R.C.S.

Hay, Breconshire,
Dec. 22, 1843.

Nov. 17th, 1843.—Called to Mrs. Barker, housekeeper in a gentleman's family, æt. 40, of plethoric habit, whom I found with the following symptoms: Frequent, harsh, dry cough; occasional paroxysms of great difficulty of breathing, with crowing inspiration; sensation of oppression and heat about the throat; distressing cough, and feeling of suffocation produced by swallowing the least quantity of liquid. Pulse 120, and full. On applying the stethoscope over the larynx, a loud, harsh, penetrating sound was heard; whilst that of the trachea and bronchi was perfectly natural. There was no appearance of inflammatory action about the fauces.

The case was evidently one of uncomplicated acute laryngitis.

V.S. ad ʒxvj. (Faintness produced.) Emp. Canth. sterno. Hyd. c. Cretâ, gr. v. 4tis horis.

18th.—Very slightly relieved.

V.S. ad ʒxij. Leeches over larynx. Hyd. c. Cretâ, gr. iij. 4tis horis.

The quantity of grey powder in each dose was lessened by way of precaution, as I was told she had suffered severely from ptyalism at a former period, when residing in the West Indies.

19th.—No better. Ptyalism has appeared (produced by 32 grains of the grey powder.)

To discontinue the mercury. Leeches over the larynx. V.S. ad ʒxij.

20th.—Cough less harsh; pulse 118. Altogether there seemed to be an improvement this morning; but in the evening the cough again became almost incessant, as well as harsh and dry. Pulse 130i

V.S. (lying down) to faintness.

About thirty ounces flowed. Neither this nor any other portion of blood taken exhibited the buffy coat.

21st.—Cough dry and frequent, but still there is an improvement. Pulse 120.

V.S. ad ʒxiv.

22d.—Symptoms improving.

23d.—A decided amendment. Pulse 100. Cough softer, and for the first time followed by expectoration.

Emp. Canth sterno.

24th.—Still improving. Pulse 90. Slept two or three hours at a time during the night. Previous to this the cough altogether prevented continuous sleep. The laryngeal sound is becoming natural.

From this date I discontinued my attendance, and left the patient in the care of her master, who is a surgeon, though retired from the fatigue and care of practice. From him I have occasionally learnt that the case continued to progress favourably under a mild restorative diet, and kind nursing.

CASE OF A LARGE CALCULUS REMOVED FROM BENEATH THE PREPUCE.

BY JOHN MACPHERSON, Esq.
Civil Assistant Surgeon, Howrat.

(For the London Medical Gazette.)

JUNE 20, 1843.—G. D., æt. 45, a Hindoo, presented himself, complaining of inability to pass his urine freely. His urine has dribbled away from him for the last two years, causing much pain and inconvenience; he does not remember ever having been able to retract his prepuce; general health good.

On examination the testicle was found to be enlarged, and the skin of the penis, and especially the prepuce, much thickened and hypertrophied. No urethral orifice could be detected, and a hardened body was felt occupying the natural situation of the glans, and resembling it in general form.

With the view of exposing the glans, circumcision was performed, when a calculus was discovered retained *in situ* by the mucous membrane, which was white, tough, and thickened, having undergone the so-called cartilaginous degeneration of Andral.

The removal of the calculus and thickened mucous membrane exposed the urethral orifice, which was of its natural size, while the glans itself was

in a state of atrophy, almost obliterated by pressure.

The calculus thus found between the prepuce and the glans is whitish, homogeneous, and friable, consisting chiefly of phosphates. It is between a nutmeg and a walnut in size, and before it was dried, weighed almost half an ounce. It is spherical, flattened a little in front and behind. The surface in contact with the inside of the prepuce was smooth, the other one rough, where it was exposed to the action of the stream of urine.

Immediate and complete relief followed the removal of the calculus. Various opinions have been entertained regarding this very unusual form of urinary concretion.

1. As a collection of small calculi between the glans and prepuce is more commonly met with than a single large one, it has been supposed that they originate in the bladder,* pass along the urethra, but are not able to escape from beneath the tense prepuce, and therefore accumulate there.

2. In the case of a single calculus, it may be supposed that a single piece of gravel has passed from the bladder, and become impacted under the prepuce, and thus formed the nucleus for a large stone.

3. Some have regarded these stones as a diseased product of the mucous membrane of the glans and prepuce, which in these cases is generally altered in structure.

4. Others, again, believe that these calculi are formed where they are found, and are gradually formed by the process of cooling and straining which the urine must undergo in cases of extreme phymosis.

The last opinion accords best with the history of the case. The chief points of interest are, the size of the concretion, the atrophy of the glans, and the complete absence of ulceration, which the presence of a foreign body might have been expected to occasion, explained, however, by the state of the mucous membrane.

* The above is the substance of a paper read before the Medical and Physical Society of Calcutta, to which the calculus was presented.

CASE OF THE SUCCESSFUL REMOVAL OF A DISEASED OVARIUM, OF *Two Years' duration.*

By Dr. Frederic Bird,

Consulting Accoucheur to the Western Dispensary, Physician to the Metropolitan Free Hospital, and to the Westminster Maternity Charity, and Lecturer on Medical Jurisprudence at the Westminster Hospital.

(For the London Medical Gazette.)

Early in the past month, I was consulted by Miss ——, aged 21, who was the subject of abdominal tumor. The history of her case is the following:— With the exception of the diseases incident to childhood, her previous general health had been uninterruptedly good. At the age of sixteen the catamenial function was developed, and continued undisturbed until two years ago, when it became suddenly suppressed; three months after which abdominal enlargement commenced, but so gradually did it proceed, and so slight were the concomitant symptoms, that she was unconscious of the presence of disease, until her attention had been directed to her increasing size by those around her. She was at that time residing on the continent, where she placed herself under medical treatment, but receiving no benefit returned to England. The amenorrhœa was but of short duration, the catamenia reappearing after an interval of three or four months, and have since observed regular periods of recurrence; the secretion, however, has generally been greater than usual, and not unfrequently menorrhagic. The tumor, limited during the first four or five months to the hypogastric region, continued to acquire increased size, and during the last twelve months has occupied the entire cavity of the abdomen. Her general health has lately become much impaired, partly from the immediate effects of the disease, but in a greater degree by the hopelessness of relief, produced in her mind by the previous unsuccessful employment of remedies.

At the time of my first seeing her, there was a quick and irritable pulse, she was emaciated, her spirits depressed, and she suffered from frequent headaches; but, after having been informed

of the relief an operation might afford, these symptoms in a few days became much less severe. On examining the abdomen, the tumor was found to encroach considerably on the boundaries of the thorax, and to project outwards from the pubis for several inches. Fluctuation was distinct, and could be produced in equal degree at every part of the abdomen; percussion elicited a uniform dull sound, except at the left and partly at the right hypochondrium, where the tympanitic intestines gave rise to resonance; occasional nausea and vomiting of biliary matter, a torpid condition of the bowels, neuralgic pain in the course of the left sciatic nerve, and some general emaciation, were the leading symptoms present.

Having on two subsequent occasions carefully examined the condition of the abdomen, I came to the opinion that the disease was ovarian dropsy; that peritoneal adhesions were most probably absent; and that the tumor did not present any characters forbidding its extirpation. Before, however, suggesting the operation to her, I requested that she might have the advantage of the opinion of Dr. Hamilton Roe; who, after an examination of the case, confirmed me in the diagnosis, and not only sanctioned the performance of an operation, but prognosticated its successful issue. The removal of the tumor was then proposed, its attendant dangers and probabilities of success and failure clearly explained to her. A ready acquiescence followed, and Thursday, November 23d, was fixed for its performance.

The only preliminary measures were those employed in my former case, namely, the previous exhibition of a few grains of extract of colocynth, with blue pill, the use of a restricted diet, and artificially raising the temperature of the chamber.

Nov. 23d.—Favoured by the presence of Dr. Hamilton Roe, Mr. B. Phillips, Dr. Andrews. and Dr. Cape, the operation was thus performed;—The patient was placed transversely on the bed, her legs hanging over its side, and being supported by cushions to such a height as to preserve the tenseness of the abdominal parietes without rendering her position painful or uneasy. An exploratory incision, about an inch in length, was then made a little below the umbilicus, the peritoneal cavity opened, and the index finger introduced, for the purpose of ascertaining if adhesions were present at that part; and, having found that none existed, the incision was immediately enlarged to about four inches and a half. A little venous hemorrhage occurred, ceasing on the application of a cold sponge, whilst the tumor, pressing forwards, so effectually filled the opening, that the small quantity of blood escaping was completely prevented from passing into the peritoneal cavity. During the brief interval occupied in completing the incision, the distended cyst could be seen rising and falling synchronously with the respiratory action of the diaphragm. A strong pronged forceps was next made to grasp the sac, a trochar introduced, and exit given to clear, light, straw-coloured, and not viscid fluid. As its contents became evacuated, the cyst emerged from the wound almost altogether without any forcible traction, and a considerable portion of it was soon external to the abdomen; and fluid continuing to escape, the incision was constantly kept closed up by the graduated distension of the sac. Nearly the whole of the ovarium being now withdrawn, I endeavoured to grasp the pedicle, but found that the attachment of the diseased mass to the uterus was almost sessile, nearly the entire leugth of the fallopian tube lying upon, and being inseparably connected with, the tumor, whilst the broad ligament appeared to have been carried forwards, and to have become intimately blended with the structure of the cyst. A common curved needle, with a strong silken ligature, was first passed beneath the fallopian tube, including what subsequently proved to be the principal artery. It was then firmly tied, and on being cut through, found to be well secured. A second needle, fixed in a handle and carrying two ligatures, was next introduced in such a manner as to divide the remaining part of the attachment into two portions, each of which was then separately and securely tied. In detaching the tumor some little difficulty was felt in procuring its separation without puncturing the depending portion of the sac; this arising from the small space existing for the application of the ligatures, and subsequent passage of the knife between them and the cyst. The entire

ovary having been now removed, the edges of the abdominal incision were then brought together by five interrupted sutures, and the ends of the ligatures fixed at the lower part of the wound. Cold water dressing was applied, a light linen roller drawn twice round the abdomen, and all strapping of the wound carefully avoided. The patient was then drawn to a more comfortable position in bed, and a few tea-spoonfuls of wine given her to assist in removing the slight faintness that occurred; but the fact of the tumor having been removed proved a much more efficacious restorative. The operation was borne with remarkable fortitude; scarcely a murmur escaped her, and the pulse at the conclusion was less frequent than before its commencement.

The disease was found to be seated in the right ovary; that of the opposite side, together with the uterus, was examined before closing the external wound, and fonud to be healthy.

5 o'clock, (two hours after the operation,) reaction is not yet established. Skin cool; respiration calm; pulse small but equal, ranging at 90. Slight pain about the wound.

A tea-spoonful of wine and water to be given occasionally.

7 o'clock.—Arterial action is now rapidly increasing, and with it the temperature of the body; radial pulsations feeble, somewhat irregular, in volume 100. Seven ounces of urine have been removed by the catheter.

℞ Morphiæ Acetatis, gr. j.; Aquæ Flor. Aurant. ʒj. M. fiat haustus statim dandus. No food. A little rough ice to be given occasionally.

24th, 4 o'clock A.M.—Has not slept; heat of surface increased; pulse 150, readily compressed; tongue pale and moist; no abdominal tenderness or distension.

Morphiæ Acet. gr. ss. ex Aqua Flor. Aurant. quâque semihorâ ad soporem.

7 A.M.—After the administration of the third dose of morphia, she slept for nearly two hours. Additional bed-clothes had in the meantime been thrown over her, and, whilst sleeping, most profuse perspiration took place; the pulse almost immediately falling to 134. On awaking, she expressed herself as devoid of all pain and uneasiness; her countenance free from anxiety, and her mind unperturbed. At her desire the ice has been freely allowed.

9 A.M.—Continues to perspire; pulse has fallen to 124, and is soft and regular. Six ounces of urine by catheter.

2 P.M.—Has slept at intervals; surface moist, and scarcely above the natural temperature; pulse 116. Urine seven ounces.

7 P.M.—There is now some accumulation of flatus in the stomach or transverse colon, giving rise to local uneasiness and tendency to vomit; there is a marked distension of the epigastric region, but no tenderness on pressure; skin more hot, though perspirable; pulse irritable, 126. Small quantities of hot port wine and water, strongly spiced, were given, and quickly followed by copious eructations, and simultaneous relief to her symptoms. A few ounces of urine drawn off.

Morphia Acetatis, gr. j. horâ nona.

25th, 6 A.M.—About four o'clock she became restless, after having slept for an hour and a half, the pulse increasing in frequency, and assuming a different character, more full, less yielding to pressure, and 130; skin hot, and more dry; pain in the head, and intolerance of light, and nausea, but no vomiting. There is now no abdominal pain on pressure or otherwise; the tympanitic distension has disappeared, and although there is at present no evidence of inflammatory action, yet her general condition is that which would favour its development. With the view of anticipating any such attack, and to lessen the undue action of the arterial system, I directed that blood should be taken from the arm by a free orifice, until a decided impression should have been made on the circulating force. When about sixteen ounces had been withdrawn slight faintness occurred; but, quickly passing off, was followed by marked amelioration of symptoms.

Morphiæ Acetatis, gr. ss. statim et repetatur post horam si opus fuerit.

Calm sleep succeeded to the first dose of the morphia, lasting for two hours; and at 1 o'clock P.M. she presented a decided improvement. Healthy action of the skin was going on; pulse 124, equal and soft; countenance animated by hope, and voice cheerful. Since the last report she has taken

Two ounces of water arrow-root, a cup of tea, a little dry toast, and ice.

The urine has been removed by catheter as often as any necessity for doing so existed; it is healthy both in quantity and in character. The upper part of the wound has healed, the lower suppurates. The blood drawn has been allowed to remain until the present time; it is neither cupped nor buffed, but presents an unusually large proportion of fibrin.

26th, 2 A.M.—As night approached some restlessness occurred; but, after the administration of half a grain of morphia, she slept tranquilly for two hours. Pulse 128. Urine secreted during the last twelve hours, 16 ounces.

12 A.M. Pulse 116; skin and tongue natural. The bowels have not been relieved since the day preceding that of the operation.

℞ Ext. Coloc. Co. gr. viij.; Pil. Hydr. gr. ij.; Olei Cassiæ, ♏ij. Fiant Pilulæ duæ hâc nocte sumendæ. For diet a little vermicelli, tea, and dry toast, with a small quantity of arrow-root.

27th, 5 A.M.—Passed a rather restless night, but is now in the same state as yesterday. The bowels have not acted.

Enema Olei Ricini statim injicienda et repetanda post horas quatuor si ops sit.

Vespere.—Three enemata were employed before the bowels were relieved; when four copious scybalous evacuations resulted, accompanied by the passage of much flatus. Pulse 110.

28th.—Disturbed, during the night, by the bowels again acting; the evacuations presenting a much more healthy character.

Allowed veal broth with vermicelli, in addition to former diet.

29th.—Passed a tranquil night, and now complains only of her still spare diet. Pulse ranges at 100.

30th.—Bowels not having been relieved, an enema was made use of, and followed by two dejections.

Dec. 2d.—Rapidly improving; pulse 84; bowels not acting.

℞ Magnes. Sulphatis, ℥ss.; Acid. Sulph. Dil. ℥j.; Syr. Aurantii, ℥ss.; Infus. Rosæ Co. ℥vij. Fiat Mistura cujus capiat cochlearia ampla duo bis terne die. For diet, a mutton chop, arrow-root with milk, tea and dry toast, daily.

14th.—The notes made since the date of the last report serve but to mark the speedy and uninterrupted approach of convalescence. Increased diet has been cautiously allowed, and is now unrestricted. The temperature of the chamber, which at the time of the operation was 85° F., was, after a lapse of three days, reduced to 70°, and now does not exceed 60°. She has for several days quitted her bed; menstruation has been normally performed; the secretions are healthy; and she is rapidly gaining strength. The abdomen, which for the first few days after the removal of the tumor, was much retracted, has now, from the return of the viscera to their natural situations, become more full. One of the ligatures came away on the fourteenth day after the operation, the remaining ones on the seventeenth; the external wound has quite healed, and she is now in all respects perfectly well The dimensions of the abdomen before and after the performance of the operation are the following:—

From ensiform cartilage to pubes, before operation, 15½—after operation, 10½.
Circumference of the abdomen, before operation, 39—after operation, 22½.

The tumor was of an ovoid shape, having a regular outline at its superior portion, whilst the inferior was marked by elevations and depressions corresponding to the unequal pressure caused by the surrounding pelvic viscera. It consisted principally of one large cyst, having walls of various density and structure, presenting generally a thickness equal to the fourth of an inch, but in some parts had acquired twice that measurement. In these latter portions large plates of atheromatous deposit existed, in several parts of which points of ossification could be observed. No peduncle was attached to the tumor, unless a slight projection of the fallopian tube can be called such. The broad ligament was continuous with, and appeared to form a part of, the sac. The fallopian tube was also closely adherent throughout, its structure in several parts being blended with that of the cyst; it was elongated, stretching across the posterior part of the tumor in a tortuous manner to the extent of nine inches.

The sac was very vascular, each portion of it being covered by a dense network of vessels, formed by the numerous ramifications of one large and two smaller arterial trunks. The former equalled in size the brachial artery, and passed, in form of a cincture, almost entirely round the tumor, pursuing one-

third of its course without dividing, but giving off many lateral vessels; the two smaller arteries followed a different course, being very tortuous, and uniting on either side by means of their ramifications.

Near the inferior part of the cyst, and within it, were developed several smaller cysts closely adherent to the parent sac, and containing fluids of varying densities: a small portion of solid matter was also prosent. The fluid contained in the primary cyst had a light straw colour, transparent, and not viscid, having a strong saline taste, containing no free albumen, and having the specific gravity of 1·007. The total weight of the tumor amounted to twenty-seven pounds.

Remarks.—Although it is not my present purpose to make any lengthened remarks upon the general question of extirpating diseased ovaria, I am yet unwilling to allow the present case to be recorded without briefly alluding to the evidence it affords in favour of the method of operating I have ventured to advocate. The necessity for having recourse to what has been called the major operation, or large abdominal section, is far from being so well established as some recent writers have affirmed, and although relative success may have attended operations of this kind, it still remains a matter of high importance to inquire to what extent such success extends. Unless the ovarian tumor be nearly altogether free from contained fluid, the great incision recommended cannot be required for the removal of the diseased organ. It is quite true that by such procedure the operation may be rendered more easy of performance, and the tumor may be removed in its unpunctured state; but in what does this latter circumstance benefit the patients in whom it may occur? In the case I have here related, the size of the tumor was very considerable, its attachment to the uterus was not that commonly met with, and presented somewhat greater difficulty in the way of removal; nevertheless this was safely effected, and the operation completed by an incision of comparatively small size. Had a greater amount of solid matter been found than was anticipated, and if of too large a size to remove otherwise, the elongation of the abdominal incision would have been but a very simple proceeding. Again, if it be a matter of importance to prevent the entrance of air into the peritoneal cavity, then is an incision of medium size best calculated to effect such object. In both cases in which I have operated a portion of the cyst has escaped from the abdomen immediately after the incision was made, thus dividing the tumor into two portions, an internal and an external, the connecting portion, or neck, being by the law of the equality of fluid pressure kept constantly and accurately adapted to the walls of the aperture, in consequence of the continued passage of fluid from the cavity of the sac; whilst, in the instance of the very large incision, it is difficult to imagine how this can be effected, as after the removal of the tumor the consequent flaccidity of the abdominal walls would render the accurate adaptation of the edges of the wound a matter of the greatest difficulty, at least as relates to the instantaneous manner in which it must be performed in order to prevent the admission of air.

It is, however, in the subsequent condition of the abdominal walls that a strong argument may be found against the employment of very large incisions; re union of the abdominal parietes after the receipt of such injuries is not found to take place in so complete a manner as to prevent the future occurrence of visceral protrusion, and hernia is far from an unfrequent consequence. It is, I believe, by the employment of an incision of moderate size, sufficiently large to allow of the introduction of the hand of the operator, if required, that the probabilities of complete success will be enhanced. The form of operation to which the term *minor* has been applied is insufficient, inasmuch as the employment of mechanical force, from the smallness of the incision, can scarcely be avoided. The question of the influence of age upon the success of the operation is one of much interest, more especially as the removal of ovarian disease is a still greater desideratum in the young than in the more advanced in life. Considerations other than these of the ultimate effects of the disease in earlier life, exert a powerful influence, and in the lady whose case I have related, the consciousness that the deformity produced by her malady rendered her *hors de société*, formed an important

element in the self-conducted argument that induced her to submit to, and, indeed, to seek the operation. The proneness to inflammation was not greater than has been observed in persons of more advanced age, and that source of danger once passed, her youth doubtlessly exerted considerable influence in causing her rapid recovery. That disturbance of the general system, and a tendency to increased action, is to be expected in persons of all ages as one of the immediate results of operations of this kind, is not, I conceive, solely attributable to the shock produced, or to the exposure of a large serous surface, but that another cause is to be sought for in the fact that a free secretion that has been going on uninterruptedly for years is suddenly arrested by the extirpation of the diseased organ; the amount of circulating fluid before necessary for its support is thrown back upon the system; increased action results, which, favoured by collateral influences, may terminate in inflammation.

With reference to the probabilities of success and of failure in future cases, but little can yet be said. So far as the different methods of operating are concerned, it will, I doubt not, be hereafter found that the chances of success are against the employment of the large abdominal section. Both these questions can alone be satisfactorily solved by statistical records; and, as a very important feature in their construction, it is most essential that all cases be invariably and faithfully reported, not only as regards their success *quoad* the operation, but also as relates to the complete re-establishment of health. It is painful to imagine that successful cases can be published, re-published, and circulated most extensively, both within and beyond the pale of the profession, whilst those in which death may have resulted as the consequence of an operation, shall be passed over untold and unrecorded, leaving no evidence of their ever having occurred beyond that of the uncertain tongue of rumour. To record faithfully, and with equal publicity, successful and unsuccessful cases is, in the present state of our knowledge, a moral obligation, from the full performance of which no honourable mind would shrink.

38, Craven Street.

ON THE EFFECTS OF THE COD'S LIVER OIL UPON STRUMOUS AND OTHER DISEASES.

To the Editor of the Medical Gazette.

Sir,

Various notices of the effects of the cod's liver oil upon strumous and other diseases having come under my observation, I determined on testing its medicinal virtues when an opportunity offered. If you think that the subjoined notes of cases treated by me at the Royal Sea Bathing Infirmary, Margate, during last summer, of sufficient interest, will you have the goodness to give them a place in your journal? I have prefaced them with some observations on its effects, which, I think, are warranted by the result of the treatment. Of their correctness I leave your readers to judge, from the recital of the cases before them.—I am, sir,

Yours very obediently,
William Oliver Chalk.

3, Nottingham Terrace, York Gate,
Regent's Park,
December 18th, 1843.

Remarks.—It would seem that Ol. Jecoris Aselli is an active therapeutic agent in strumous, rheumatic, and some skin diseases; and that its revival as a remedy is likely to prove of great service. It cannot be considered as a merely dietetic* agent, cases 8, 15, 33, being of themselves sufficient to negative the conclusion. It possesses considerable power in allaying the diseases of the joints, especially strumous and rheumatic, and that with a rapidity unequalled by most other medicines. Tubercular depositions are absorbed under its influence (cases 15, 26, 27). Even in the lungs† it appears to have the power of arresting, or at least of modifying, the deposit (cases 4, 20, 30). Scrofulous diseases of the bones are relieved by it (cases 13, 23). Faulty secretions are quickly changed to healthy, especially the hepatic. Some experiments were made on patients

* Vide Br. and For. Quarterly Journ. Jan. 1842, page 200. Review of Dr. Bennett's work on the cod's liver oil.

† I speak with caution on this point, as my observations are not sufficiently numerous to arrive at any positive conclusions; yet they seem to me sufficient to render a further and separate inquiry of value, especially as it has been observed by others.

where no local affection existed, with a view to ascertain its effects on the biliary organs. Its success, in several instances, was complete, in changing the varied and clay-coloured motions of scrofulous habits to a healthy condition. With children the exhibition of the oil was commonly followed by relaxation of the bowels; with adults it frequently produced constipation. One of the most remarkable properties is its power of inducing *embonpoint*, and of restoring a healthy hue to the countenance. The number of patients treated with Ol. J. A. amounted to between eighty and one hundred, of whom a large majority obtained decided relief. A great deal of difficulty was at first experienced in the administering of a remedy so disgusting and nauseous; nothing, I believe, could have induced many to take it but the opportunity they had of observing its good effect on others. Since my return to town, I have endeavoured to obtain a purer oil, for, however useful as a medicine, it would be impossible to bring it into general use unless deprived of its impurities. After examining several specimens, I have found that prepared by Mr. Wright, of 54A Gloucester Place, Portman Square, to be the best, and its qualities unimpaired by the process employed for its purification. He states, as the result of his experiments, that he has obtained oils of various qualities, some of them quite inert. The liver of the milter cod yields the strongest oil, and darker in colour than that of the spawner. The two specimens now by me are exceedingly pure, nearly inodorous, and of a crystalline clearness. One is of a brown colour (the milter), the other of a light yellow (the spawner); the specific gravity of the former is ·921·5, temp. 64; that of the latter ·919, temp. 64. The quality of the oil is considerably impaired when a high temperature is employed in the manipulation. The object in giving publicity to these cases is not to speak of the cures performed by ol. jecoris aselli, for they will be found comparatively few, but to call the attention of others to the fact that it does yield relief to a class of patients whose diseases too often baffle the attempts of the most enlightened practitioners, and to induce them, when opportunity offers, to test its virtues for themselves. The seven last cases detailed are given merely as examples of the ill effects which sometimes ensued whilst prescribing it at the Infirmary.

Case I.—James Rush, æt. 29, admitted May 16, 1843, suffering under strumous synovitis of the right ankle, complicated with rheumatic action. The tibia is considerably enlarged, and the periosteum much thickened at the articulation; there are several sinuses on its outer and inner side, discharging a profuse and unhealthy pus. He suffers great pain at times, and is in a very weak and emaciated state. After undergoing the usual plan of treatment, with little or no relief, until July 20th, he began taking Ol. Jecoris Aselli, ʒss. ter quotidie, which he continued without intermission until September 26th, when he was discharged from the infirmary. He states that his general health has not been so good as it is now for years; his appetite is excellent, the tongue clean, and the pulse good; he has gained flesh surprisingly, and his whole appearance is much altered for the better. The ankle is smaller, and free from pain; the discharge, formerly so copious, is now slight and healthy; two of the sinuses are healed, and he has regained partial motion of the joint. He says that the oil produced a sensation of nausea for the first few days; after that time it ceased to be disagreeable to him. He had not taken it more than a day or two before there was a visible alteration in the local and general symptoms for the better.

Case II.—William Delay, æt. 26, admitted August 4th, suffering from extensive strumous ulceration of the right side of the face and neck, extending as low down as the clavicle. The head is inclined to the shoulder of the side affected. He is in a very weak and debilitated state. He attributes his present symptoms to a severe attack of erysipelas in February last, the ulcers having formed about fourteen days after his recovery from it.

August 5th.—A suitable local treatment having been adopted, Ol. J. A. ʒss. ter die was prescribed. The first dose produced a disposition to sickness, and recoiled on the stomach, especially after meals; these sensations wore off in two or three days. He has continued taking it, without intermission, up to the present date, October 19th. He states that his general health is greatly improved, and he thinks that he has gained full a stone in weight. The tongue is very clean, and the pulse natural; his countenance is florid and healthy. Several of the ulcers are healed, and the remainder are healing; that on the neck, which was nearly as large as one's hand, is diminished to half its size. He says that he has quite conquered his repugnance to the oil.

Case III. — Ed. Curtis (out-patient), æt. 24, admitted October 9th. Has been labouring under strumous synovitis of the right knee for the last four years. The parts are swollen, hot, and painful on pressure; the slightest attempt at motion causes severe pain. He complains of general weakness; the pulse is quick and feeble, and the tongue furred. He was ordered the use of the warm sea-water bath three times a week, to surround the joint with an ointment of the iod. of mercury, and to rest the limb as much as possible.

October 12th. — The symptoms having increased rather than diminished, Ol. J. A. ʒj. ter die was prescribed, which he took without producing any disagreeable effects, such as nausea, &c. He was discharged at the closing of the infirmary, October 23d. He states that he feels stronger, and that his appetite has increased. His general appearance is much improved. The tongue is clean, the pulse firmer and less frequent, the knee is not so swollen or painful, and the heat has subsided. He can bear a considerable degree of motion without experiencing pain.

Case IV. — Thomas Haynes, æt. 19, admitted May 12th. Is phthisical. He has occasional fits of coughing, accompanied by purulent expectoration. There is a cavity at the summit of the right lung, pectoriloquy being audible over a considerable space below the clavicle. A portion of the left lung is solidified from deposition of tubercular matter. The sound is very dull at the upper part of the thorax. A mucous rhonchus is heard at different points on both sides of the chest. He is in a state of great debility; the tongue is furrred, bowels inactive, appetite defective, pulse frequent and feeble; he has febrile accessions, followed by profuse sweats; he is suffering from caries of the left os calcis; the outer ankle is hypertrophous, and there is a large foul ulcer discharging a highly fœtid pus; the metatarsal bone and phalanges of the right great toe are also the seat of caries, accompanied by enormous hypertrophy of the soft parts; there are several unhealthy ulcers situated over portions of denuded bone. As very slight relief had been afforded to the general or local symptoms, especially to the former, up to July 18th, the oil was prescribed on that day in half-ounce doses three times daily. Nausea and catharsis followed its exhibition for a day or two. He has continued taking it, with slight intermission, up to the present date, October 19th. He states that his general health is greatly improved, his appetite has increased, and he has gained flesh. The pulmonary symptoms are rather ameliorated than otherwise, the cough having nearly subsided; the hypertrophy of the ankle and toe greatly relieved; the ulcers are healthy, and have partially healed; that on the ankle is much diminished.

Case V.—Richard Jones, æt. 20, admitted August 23d, 1843. Psoriasis of a very severe character occupying the hands and wrists, from which he has been suffering, at different periods, for the last four years; the face is also slightly affected. He attributes its occurrence to the drinking of a great quantity of cold water whilst under the influence of profuse perspiration, in the month of July 1839. The hands and wrists are covered with thick scales and deep fissures, producing pain and violent itching. He was ordered to use the warm sea-water bath three times a week, at a temperature of 98°, and to remain in only five minutes. An ointment of the iod. of mercury, and subsequently that of iod. of sulphur, was applied to the eruption. The sulph. iod. was exhibited internally, and afterwards changed for O'Donovan's solut. hydriodatis arsen. et hyd. combined with compound decoction of sarsaparilla and inf. of colomba. These remedies were persevered in until September 22d, without producing any beneficial results. Ol. J. A. in doses of ʒss. three times a day, was prescribed. The local treatment consisted in the application of ung. cetacei, merely to allay the itching and soften the scales. He continued taking Ol. J. A. until the day of his discharge, October 19th. The only trace of the disease now remaining is slight articular efflorescence. He says that he has never been so free from it since its first appearance. He observed an amelioration in the local symptoms after he had taken the oil about a week. For the first two or three days it recoiled on the stomach, and acted freely on the bowels twice during the day. He has gained flesh rapidly, and his countenance is florid and healthy.

Case VI.—John Warren, æt. 18, admitted Sept. 8th, suffering from lepra vulgaris occupying the surface of the body and the extremities, and affecting the scalp. The disease made its appearance five months since, after a severe cold. The warm salt water bath was ordered three times a week, and persisted in until Sept. 25th, during which time the eruption had undergone an alteration for the worse. The use of the bath was suspended, and he took Ol. J. A. ʒss., which produced slight sickness, and for the first week he could only take it twice a day, after which he conquered his dislike, and continued it three times daily up to the present date, Oct. 19th. He has improved rapidly; the eruption is fast disappearing, the scalp and forehead are free from it. (It should be mentioned, that to these parts he has applied Ung. Hyd. Iod. every night for some time past.) He states

that he has gained flesh to such an extent since taking the oil, that his clothes scarcely fit him. His general appearance is that of excellent and robust health.

Case VII.—Henry Cracknell, æt. 49, admitted August 8th. Paralysis of the upper extremities. He can move the arms slightly; the wrists are powerless; his speech much affected. He states that at the latter end of February last he suffered from a violent attack of rheumatic fever, in which the abdominal muscles were severely implicated, accompanied by frequent vomitings. In about three weeks from the commencement, he began gradually to lose the use of the shoulder, the wrists, and finger joints, suffering at the same time acute pain in them. Having partially recovered from the rheumatic attacks, at the end of July following he had a fit, after which his articulation became imperfect, and the paralysis more complete. He was ordered the warm sea-water bath three times a week, at 98 degrees of heat. This was changed for the douche bath to the upper extremities, and the warm sea-water bath twice a week, at the same temperature. On September 6th the oil was prescribed; the first dose produced violent vomiting, and he could not make up his mind to take it again for some days. He recommenced, however, with the same quantity (℥ss.), and continued it three times a-day, without experiencing any disagreeable effects, up to the present date, October 19th. He has recovered the power of utterance, does not suffer any pain, is able to raise his arms (the paralysis being confined to the wrists, which, however, are much stronger), and has gained flesh considerably. He says, that after taking Ol. J. A. for about a fortnight, the rheumatic pains were relieved, and his appetite increased.

Case VIII.—Joseph Allton, æt. 37, admitted September 15th: chronic rheumatism of nine weeks' standing, affecting the knees and legs; he suffers severe pain, with total inability to walk or stand; he is much reduced, and has not been able to quit his bed since he was first attacked.

16th.—℞ Ol. Jecoris A. ℥ss. ter die.

After he had taken it about two days, so much relief was obtained, that he was able to walk across the ward, assisted by two persons. He continued taking the oil with regularity up to October 13th (the day of his discharge). He had gained flesh and strength surprisingly, and was able to walk on crutches free from pain. He stated that he took the oil in larger doses than was prescribed, viz. from ℥j. to ℥ij., and that he avoided the nausea, &c. it first occasioned, by smoking. Considering the severity of the case, and the short time of treatment, the improvement was remarkable.

Case IX.—Henry Meyer, æt. 21, admitted as out-patient August 29, 1843: rheumatic synovitis of the left knee; it is enlarged, and very much contracted; the motion of the joint is greatly impaired; any attempts at flexion or extension give pain: this state of the articulation was produced by a severe attack of rheumatic fever in July 1842.

Sept. 7th.—Was ordered to apply the Ol. J. A. every night as a liniment to the knee, and to take a table-spoonful three times a day. For the first two or three days it created a sensation of nausea.

Oct. 11th.—The knee is greatly relieved, although it remains much contracted; he has regained a good deal of motion, and can bear the attempt at flexion or extension without much pain. He has gained flesh rapidly during the time he has been taking the oil; his countenance bears the hue of health; the tongue is clean, and pulse natural. He says that he has never felt so well at any period of his life.

Case X.—John Chapman, æt. 32, admitted May 15, 1843: rheumatic synovitis of the left knee; the motion of the joint is greatly impaired; the patella is immoveable from anchylosis. He complains of pain and general weakness of the limb; he is able to walk a little by the aid of a stick. This state of the articulation was induced by an attack of rheumatic fever during the winter. After persevering in the usual remedies with some benefit until August 12th, the oil was prescribed in doses of 3vj. three times a day, and to be rubbed on the knee every night. The usual symptoms followed its first exhibition; he could not take it for more than a week consecutively, as at the end of that time he suffered from nausea and constipation; he was able to resume it, however, in two or three days after the bowels had been moved by an aperient. In this way he has taken the oil with great benefit to himself up to the present date, October 23d. He says his general health is excellent, and that he has gained flesh considerably. The knee is of its natural size, and free from pain; he has recovered a great deal of motion; the only obstacle to the perfect action of the joint being the fixed state of the patella: he can walk two or three miles with ease.

Case XI.—John Borowski, æt. 30, admitted August 10th: chronic rheumatism, affecting severely the joints of the fingers and toes, producing great deformity of the latter, by distension of the capsular ligaments and partial dislocation. He complains of pain in the shoulders and wrists: these symptoms are consequent on an attack of rheumatic fever five years since. In addition to the warm bath, from which he had derived much relief, Ol. J. A. was prescribed September 15th: for the first few days it acted freely on the bowels.

Oct. 6th.—The deformity of the articulations was much lessened: he suffered scarcely any pain; his general health greatly improved, and he had gained flesh during the last three weeks.

Case XII.—Richard Dyer, æt. 23, admitted September 6th: is suffering severely from chronic rheumatism in the hands, knees, feet, and ankles; he has been so affected nine months.

26th.—Having derived little relief from his previous treatment, he was ordered Ol. J. A. ʒiij. ter die. The first few doses produced constipation, and recoiled on the stomach; after this his appetite began to improve; his countenance became obviously altered for the better; the rheumatic pains were greatly relieved, and he was enabled to walk free from pain until October 8th, when, the weather becoming suddenly cold and boisterous, he had a relapse.

October 13th.—He is now getting better, and states that he has on the whole derived great benefit from the oil.

Case XIII.—John Cross, æt. 17, admitted May 30th: necrosis of the right femur, consequent on scarlet fever twelve months since: strumous ulcers on the inner ankle of the same limb.

August 17th.—He took cold, which terminated in an attack of rheumatic fever. On the subsidence of the febrile symptoms, he remained in a very weak and emaciated state.

Sept. 20th.—℞ Ol. J. A. ʒss. ter die.

It has been taken with regularity up to the present date, October 24th. The ulcers are fast healing: his general health is greatly improved; he has gained flesh considerably, and his countenance wears the hue of health.

Case XIV.—Thomas W. Skeys, æt. 10, admitted May 9th: strumous hypertrophy and ulceration of the index finger of the right hand, with caries of the first phalanx. The right great toe is similarly affected. There is an unhealthy ulcer on the outer side of the left heel, with caries of the os calcis. These symptoms are accompanied by great derangement of the digestive organs, and general debility. After undergoing a course of treatment which consisted in the application of leeches to the epigastrium, a careful regulation of the bowels by aperients, enemata, alteratives, sarsaparilla, &c. with very decided relief, on August 24th three drachm doses of the oil were ordered to be taken three times a day, as the general and local affections seemed to have been retrograding during the preceding ten days.

Oct. 16th.—He has continued it regularly up to the present date. Hypertrophy of the index finger and great toe very much relieved (the first phalanx has been removed from the former); ulcer on the heel diminished in size, and healthy. His general appearance has undergone a great alteration for the better; he has gained flesh; the tongue is clean; pulse normal; the evacuations, previously clay-coloured and changeable in appearance, are now healthy. He states that the oil was not disagreeable to him, and that he always felt exhilarated after taking it.

Case XV.—Robert Selby, æt. 14, admitted May 12th. Expanded condyles of the femur and head of the tibia, from depositions of tubercular matter in their cancellous structure: he suffers constant and severe pain in the articulation: the knee is much contracted; there is also a large chronic abscess on the anterior part of the thigh, just above the joint: these symptoms are accompanied by great constitutional disturbance, viz. hectic fever, profuse sweats, and sleepless nights, loss of appetite, furred tongue, irregular state of the bowels, and clay-coloured evacuations; he is greatly emaciated, and appears to be fast sinking under the disease; he has been ill seven months. The stethoscope does not afford any evidence of tubercular deposit in the lungs, although the general aspect of the patient would lead one to suspect it. As no alleviation had been afforded either by the general or local treatment, and his sufferings being great,

July 5th—A table spoonful of Ol. J. A. was ordered to be given three times a day. The knee, at this time, had greatly increased in size; the parts were hot, tense, and extremely painful; the leg was twisted, and flexed on the thigh, giving rise to partial dislocation of the head of the tibia; the least motion or jarring of the body caused severe pain; it was distressing to observe the anxiety and watchfulness induced (on the part of the patient) by the last mentioned symptoms. On visiting him the following morning at 11 o'clock, I found that his bowels had been freely relieved twice previous to my visit, and that only one dose of the oil had been given the day before, as it produced great nausea, and three copious and highly fetid stools. The knee was freer from pain, and the countenance less anxious. Ol. J. A. ʒij. ter die was now prescribed: he continued taking it with regularity for a fortnight, with considerable relief to the local and general symptoms, when the stock of oil having been exhausted, he was obliged to discontinue it for three days (during this short interval the condition of the knee had altered for the worse, there were increased pain, heat, and tumefaction:) a fresh supply having been procured, the dose was augmented to ʒss. which he continued without inconvenience up to the present date, Oct. 19th. All pain in the knee has ceased, the condyles of the femur and the head of the tibia are much diminished; these now retain their relative and normal situations; the

contraction is very slight; he can put his foot to the ground, and walks by the aid of crutches free from pain; the tubercular deposit above the knee is nearly absorbed; his general health is excellent; the tongue is clean, pulse natural, alvine excretions regular, and of a healthy colour; he has gained flesh to such an extent as to cause great surprise amongst those who had previously witnessed his formerly emaciated condition.

Case XVI.—W. H. Sweeney, æt. 8, admitted August 4th: diseased state of the left hip-joint. He complains of great pain on the least movement; abscess is forming on the upper and outer side of the thigh; his general health is much impaired; the pulse feeble; tongue furred; alvine evacuations clay-coloured; appetite defective; countenance pallid. As the case had gone on very unfavourably, October 12th, Ol. J. A. ʒiij. three times daily was prescribed. He was at this time suffering from hectic fever, profuse discharge from the abscess, and severe pain in the articulation; the soft parts in the vicinity of it were hot, swollen, and painful; the slighest movement of the limb caused severe pain. Two doses of the oil were given in the course of 24 hours, and produced decided relief. It was afterwards taken regularly up to the present date, Oct. 21st. He is now able to sit up with his clothes on; the soft parts have recovered their natural state; the abscess is nearly healed; he suffers no pain, except an attempt be made to move the limb by flexion or extension; the febrile symptoms have subsided; the tongue is clearing; the evacuations are more healthy, and no longer clay-coloured; his appetite is very good; the countenance is calm, presenting a remarkable contrast to its appearance of suffering a short time since.

Case XVII.—Thomas George Kempson, æt. 9, admitted May 8th: morbus coxæ (on the left side) in its suppurative stage, with consecutive dislocation of the head of the femur on the dorsum ilii; strumous synovitis of the right knee-joint; it is much contracted; the condyles are enlarged. He suffers great pain, and cannot sleep at night. He is in a very debilitated state: the hip has been bad four years. The local and general symptoms improved, soon after his arrival, under the influence of the warm and douche baths, mild aperients, and the application of ung. hyd. iod. to the hip and knee. He continued under this plan of treatment, with little variation, until October 4th, when the knee became again very painful. Ol. J. A. ʒss. ter die, was given, and continued up to the present time (Oct. 23d). The hip is nearly healed; the knee has undergone a remarkable alteration for the better; it is smaller, less contracted, free from pain, and a considerable degree of motion has been recovered. His general health has improved very much since taking the oil.

Case XVIII.—James Thonboro', æt. 7, admitted September 4th: diseased state of the right hip of twelve months' standing; suppuration has commenced in the immediate vicinity of the joint. He complains of great pain, especially on the slightest movement: his general health is impaired, and he is emaciated.

21st.—Ol. J. A. ʒss. was ordered three times a day. The first dose made him very sick, and acted copiously on the bowels; subsequently no such effect was produced. An almost immediate alteration for the better was perceptible in the general and local symptoms, and he has continued to improve up to the present time, Oct. 24th. The hip is free from pain, and the suppurative process has been checked; his health is much altered for the better; the tongue is clean; pulse natural; appetite excellent; bowels regular: he has gained flesh surprisingly.

[To be continued.]

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

Elements of Natural Philosophy: being an Experimental Introduction to the Study of the Physical Sciences. By Golding Bird, A.M. M.D.; Assistant Physician to Guy's Hospital, &c. 2d Edition.

The appearance of a second edition of this very excellent work will be hailed with pleasure by every one interested in the education of the young aspirant for medical honours, as it proves, better than any other argument can, the increased attention now deservedly paid by the profession to the collateral branches of knowledge; sciences which, although not absolutely necessary in enabling a physician to treat pneumonia, or a surgeon a broken leg, aid alike the doctor and the patient, by enabling the former to take sounder and more enlarged views of the dynamic forces ever active in the human frame, of which the latter receives indirectly the benefit. This work now consists of twenty-nine chapters, of which nine are devoted to the physics of ponderable matter, the other being occupied with an account of the physics of the imponderable agents. A considerable portion of the latter part appears to have been re-written, and we have

been much pleased with the clear and succinct manner in which the author has treated the difficult and abstruse subjects of the plane and circular polarization of light. It is obvious that no review of a strictly descriptive work of this kind can be attempted; but, from a careful perusal of it, we are convinced that this edition is well calculated to maintain the scientific fame of its talented author; and we strongly recommend it to the student, as not only the best, but almost the only work to which he can refer in commencing the study of his profession, or in preparing himself for his examination.

A Dictionary of Practical Medicine, &c. &c. &c. By JAMES COPLAND, M.D. F.R.S. &c. &c. Part IX.

THIS part, which has just appeared, completes the 2d Vol. of Dr. Copland's Dictionary. It contains the conclusion of diseases of the lungs, and embraces a variety of articles, the principal of which are the Lymphatic and Lacteal Systems—mamma, measles, melanosis, menses and menstruation, mesentery, muscular structure, nerves, neuralgia, œsophagus, osseous system, and ovaria.

The articles are written in the same general manner as in the preceding parts, and are quite calculated to support the high reputation which the work has so deservedly acquired.

The Oculist's Vade-Mecum: a complete Practical System of Ophthalmic Surgery. With numerous woodcuts and coloured engravings of the diseases and operations on the Eye. By JOHN WALKER, Surgeon to the Manchester Eye Hospital; formerly Lecturer on the Eye in the Manchester Royal School of Anatomy and Medicine. London: 1843.

THIS work is essentially practical, and, we think, is likely to be very useful, embodying, as it does, the results of twenty years' experience in the branch of which it treats.

In such a work the great object is not to expand, but to select and condense as much as is consistent with perfect perspicuity—an object which the author appears to us to have in a great measure succeeded in accomplishing. The plan adopted is that of avoiding abstruse disquisitions, and giving clear practical descriptions of the phenomena, and an account of the most appropriate remedies. After describing the diseases of individual parts, the organ is next considered as a whole; after which the author proceeds to describe the diseases which affect its appendages.

We find at the commencement another important practical description; that, namely, of the proper mode of examining the eye, and this is the only portion which we have room to quote.

"Before, however, entering into a detailed account of the various forms of conjunctival inflammation, it may be desirable to make a few observations on the best mode of examining the eye when the seat of this morbid action.

"It is obvious that the greatest delicacy ought to be exercised in conducting the process of examination. This is important, not only on account of the feelings of the patient, but also the reputation of the surgeon; for we know that patients often form a favourable or an unfavourable opinion of the practitioner, according as he manipulates the organ in a gentle or rough manner.

"The best position for a patient under examination is, seated in a chair with a high and gently-reclining back, against the top of which his head should repose; the chair being placed either just before or on one side of the window. A room facing the north is to be preferred, as the surgeon is then less likely to be annoyed by the reflection of the sun's rays.

"In some cases, the patient will hardly be able to expose the eyes at all to the light; in others he will have no difficulty. It will be proper never to remain satisfied with the examination of merely that part of the eye which is usually exposed to view: on the contrary, we must never omit to scrutinize minutely every part of the surface of the organ. Of course a superficial view must first of all be taken, but this will be not sufficient. In our special examination, we must first look to the state of the conjunctiva of the cornea; any deviations from the natural condition should be carefully noted.

"To obtain a view of the portion of conjunctiva covering the inferior half of the eye-ball and the inner surface of

the inferior eye-lid, is, generally, a matter of no difficulty, when there is no intolerance of light or any morbid sensibility, as, for this purpose, it is merely necessary to place the tip of the fore-finger, keeping the sharp edge of the nail away, against the central portion of the outer surface of the lower lid, just below the ciliary margin, and then draw it gently downwards. Eversion of the lid is produced by this operation.

"In order to obtain a view of the conjunctiva of the superior half of the globe, and of that of the upper eye-lid, some nicety of manipulation is requisite, because the upper is much more irritable than the lower eye-lid, and it also possesses a much greater share of mobility. We may, however, usually accomplish its elevation to such an extent as to admit of the upper half of the front of the eye-ball being brought into view, by placing the thumb against the outer surface of the lid, in the same manner as the finger has been directed to be applied to the lower lid, and raising it gently towards the eye-brow, at the same time requesting the patient to turn the eye downwards.

"But, though in this manner we may obtain a satisfactory view of the upper half of the front of the globe, we shall not obtain any view of the conjunctival covering of the superior eye-lid. Eversion of this lid must be effected before its inner surface can be brought under examination, which cannot be done by simply elevating it, but may be by the following procedure:—The cilia occupying the central portion of the margin of the lid, are to be laid hold of between the thumb and fore-finger of the left hand, the back of the finger, at the same time, being placed upon the skin of the lid; then the cilia and ciliary margin being raised by the thumb, the substance of the lid is to be pushed downwards by the finger, and thus complete eversion of its conjunctival surface will often be readily produced. Sometimes, however, on account of the strong action of the orbicularis muscle, it will be more difficult to produce eversion, and it may be necessary, with the right hand, to employ a probe or some similar instrument to depress the upper and outer portion of the lid, while the thumb and fore-finger of the left hand are used to raise the cilia and ciliary margin, as before pointed out. In this way, we may always succeed in obtaining a proper view of the conjunctival surface of the upper lid.

"In examining the eyes of children, however, it rarely happens that we can succeed in inducing them voluntarily to undergo the simple processes pointed out: if there be intolerance of light and much irritability, it is impossible, and we are compelled to resort to the forcible separation and eversion of the palpebræ. The only difference required in the mode of manipulating in this case, is to place the child's head upon or between the knees of the surgeon, while the rest of his body is supported by some other person, who is seated opposite, and who secures the hands, which are otherwise apt to be very much in the way. Generally, there is but little difficulty, when the child is properly secured, in obtaining a satisfactory view of the whole surface of the conjunctiva. The only exception to this statement is, where the palpebræ are, as is sometimes the case, enormously swollen, and the fissure between them is very small, as in cases of purulent ophthalmia, in which complaint, indeed, it is sometimes absolutely impossible to obtain an examination of any thing more than the conjunctival surface of the palpebræ, the tendency to eversion of the lids rendering this an easy task, however difficult it may be to expose the conjunctiva of the globe and cornea."

We have no doubt but that students will find this a very useful, as it is a cheap and convenient manual.

On Superstitions connected with the History and Practice of Medicine and Surgery. By Thomas Joseph Pettigrew, F.R.S. F.S.A. Surgeon to H.R.H. the Duchess of Kent, &c. &c. 8vo.

This is one of the most amusing books it has fallen to our lot lately to peruse; nor is the amusement unaccompanied by utility; for it is an attempt, in a certain degree, to account for apparently miraculous effects by a reference to natural causes. Mr. Pettigrew has brought together a variety of singular circumstances bearing upon the superstitions connected with the history and practice of his profession, whether

alchemical, *astrological*, *sympathetical*, or *magical*; and he has shewn that the effects recorded in these instances, of which he has, from an extensive course of reading, culled the most authentic and the most material, are to be ascribed to the power of the mind and the exercise of the passions over the natural functions of the body. This is a department of medicine to which we have often, in the course of our editorial labours, made reference as of high importance in the cure of diseases; and Mr. Pettigrew has brought together a variety of cases in which, by the operation of terror, joy, hope, grief, &c. various diseases have not only been removed, but actually excited.

Mr. P. sets out by assuming the truth of Southey's expression, that "Man is a dupeable animal. Quacks in medicine, quacks in religion, and quacks in politics, know this, and act upon that knowledge. There is scarcely any one who may not, like a trout, be taken by tickling." He endeavours to account for the celebrity of empirics, and the confidence so extensively reposed in them, partly from the conjectural and uncertain nature of medicine, and partly from the hope inspired by the patient under the continued expression of confidence of cure proclaimed by the charlatan. The mind is readily induced to believe in that which it desires, and seldom thinks, under such circumstances, of calmly and coolly considering the stability of opinions thus boldly avowed.

In the chapter devoted to alchymy, Mr. P. has satisfactorily shown that its origin is oriental; but that it is not to be, as Geber, Thomson, and others, have stated it, referred to so late a period as Arabian science: on the contrary it would appear, from Mr. P.'s acquaintance with Egyptian lore, that there are Enchorial MSS. in which numerous chemical formulæ have been found, and that therefore the art or science, whichever it may be termed, is to be traced back as far as the flourishing period of Egyptian history. When, indeed, we reflect upon the manufactures of Egypt, the making of glass, the manufacture of linen, the working of metals, and, above all, the use of mordaunts in the process of dyeing, it cannot but be obvious that the Egyptians possessed no inconsiderable acquaintance with chemistry.

Our author gives an account of the different stones of the alchymists, or such as they pretended to compound for the possession of rare and particular properties—the mineral stone, the vegetable stone, the magical or perspective stone, the angelical stone, the philosopher's stone; and has made several quotations from the writings of the most celebrated alchemists, which are worthy of perusal; and he concludes by noticing an extraordinary opinion, expressed so recently as the year 1800, by an eminent Gottingen professor, Dr. Christopher Girtamer, that, "in the 19th century the transmutation of metals will be generally known and practised. Every chemist and every artist will make gold; kitchen utensils will be of silver, and even gold, which will contribute more than any thing else to prolong life, poisoned at present by the oxyds of copper, lead, and iron, which we daily swallow with our food."

The chapter on astrology contains much curious matter relating to talismans and the doctrine of signatures, which Mr. P. thinks may "be said to have taken their origin from a belief that medicinal substances bore upon their external surfaces the properties or virtues they possessed, impressed upon them by planetary influence. The connection of the properties of substances with their colour is also an opinion of great antiquity: white was regarded as refrigerant, red as hot—hence cold and hot qualities were attributed to different medicines. This opinion led to serious errors in practice. Red flowers were given for disorders of the sanguiferous system, yellow ones for those of the biliary secretion, &c. We find that in small-pox red coverings were employed, with a view of bringing the pustules to the surface of the body. The bed-furniture and hangings were very commonly of a red colour,—red substances were to be looked upon by the patient. Burnt purple, pomegranate seeds, mulberries, or other red ingredients, were dissolved in their drink. In short, as Avicenna contended that red bodies moved the blood, everything of a red colour was employed in these cases. John of Gaddesden, physician to Edward II., directs his patients to be wrapped up in scarlet dresses; and he says that 'when the son of the renowned king of England (Edw. II.) lay sick of the

small-pox, I took care that everything around the bed should be of a red colour; which succeeded so completely that the Prince was restored to perfect health, without a vestige of a pustule remaining.' Wraxall, in his 'Memoirs,' says that the Emperor Francis I., when infected with the small-pox, was rolled up in a scarlet cloth, by order of his physician, so late as 1765, when he died. Kæmpfer (History of Japan) says that 'when any of the emperor's children are attacked with the small-pox, not only the chamber and bed are covered with red hangings, but all persons who approach the sick prince must be clad in scarlei gowns.' Flannel dyed nine times in blue was held to be efficacious in the removal of glandular swellings." (Page 19.)

The supposed influence of the rising and setting of the stars, the eclipses of the sun and moon, the appearance of comets, &c. as influential in the production, as well as the relief, of diseases, is ably treated of; and Mr. P. seems disposed to agree with Dr. Balfour, and other writers on tropical diseases, as to the sol-lunar influence, of which, indeed, so many instanees are on record, that it may fairly be entitled to the consideration of medical practitioners in general, but particularly of those who are engaged in tropical countries.

In tracing the progress of medicine and surgery from the earliest periods Mr. P. is led to observe: "As the possession of medical knowledge was considered to be received through the direct agency of heaven, it is natural to conceive the exercise of it to have originated with the priests. In early and superstitious ages, as already shown, diseases were regarded as inflictions of the divine vengeance; and means were therefore sought to appease the anger of the gods, and mitigate the celestial wrath. Appeals to the oracles, divination, and magic, henceforth became connected with medicine. Hippocrates was the first physician to relieve medicine from the trammels of superstition and the delusions of philosophy.

"Nothing could tend more to retard the progress of medicine, and paralyse all efforts for its improvement, than the opinion, once so generally entertained, of the celestial origin of disease, which, if admitted, appears necessarily to demand divine interposition for its relief. Religion and medicine were both brought into contempt by the adoption of sacrifices and incantations, and the mercenary practices of the priests to insure intercession with the gods. Hippocrates resisted this folly and wickedness, and boldly declared that no disease whatever came from the gods, but owed its origin to its own natural and manifest cause. Even the learned Celsus, whose works are universally read and admired at the present day, whose writings are considered as forming a conspicuous portion of our standard medical literature, was not free of the prejudices of his time with regard to the origin of disease. In the preface to his work, 'De Re Medica,' he expressly says, 'Morbos ad iram deorum immortalium relatos esse, et ab iisdem opem posci solitam.' He, however, had too much good sense not to rely upon remedies as his curative agents, and, therefore, writes 'Morbi, non eloquentia sed remediis curantur.'" —p. 29.

The connection of the priesthood with the practice of medicine is thus briefly stated: —

"There is reason to fear that the purposes of medicine were converted by the monks to the basest uses, and that the authority of the physician superadded to the terrors of the church, exercised over those in whom the mind was enfeebled by disease and incapable of exerting its power, were employed in the extortion of money and the indulgence of rapacity. Want of knowledge was supplied by mystery, and faith usurped the place of effectual prescription. Hence arose the employment of charms, amulets, relics, &c. The ignorance and the cupidity of the monks caused the Lateran Council, under the pontificate of Calistus II., A.D. 1123, to forbid the attendance of the priests and monks at the bedside of the sick, otherwise than as ministers of religion. Still, however, it was secretly followed, and Pope Innocent II., in a council at Rheims, A.D. 1131, enforced the decree prohibiting the monks frequenting schools of medicine, and directed them to confine their practice to the limits of their own monastery. Some, however, continued to pursue it, and some of the secular clergy practised it as generally as before, so that the decrees were found inefficient in the

accomplishment of their object; and a Lateran Council in A.D. 1139, threatened all who neglected its orders with the severest penalties and suspension from the exercise of all ecclesiastical functions; denouncing such practices as a neglect of the sacred objects of their profession in exchange for ungodly lucre. 'Ordinis sui propositum nullatenus attendentes, pro *detestanda pecunia sanitatem pollicentes.*'

"When the priests ascertained that they could no longer confine the practice of medicine to themselves, it was stigmatized and denounced. At the Council of Tours, held in 1163 by Pope Alexander III., it was maintained that the devil, to seduce the priesthood from the duties of the altar, involved them in mundane occupations, which, under the plea of humanity, exposed them to constant and perilous temptations. They were accordingly prohibited the study of medicine, and that of the law, and every ecclesiastic who should infringe the decree was threatened with excommunication. In 1215 Pope Innocent III. fulminated an anathema specially directed against surgery, by ordaining, that as the church abhorred all cruelty or sanguinary practices, no priest should be permitted to follow surgery, or to perform any operations in which either instruments of steel or fire were employed; and that they should refuse their benediction to all those who professed and pursued it.

"Stringent as these measures were, they were found inadequate to effect the purpose intended, and it was only at length accomplished by a special bull procured from the Pope, which, by permitting physicians to marry, effectually divorced medicine from theology."—p. 34.

Mr. P. has also given a curious list of the principal Saints of the Romish Church, celebrated for the cure of different diseases, and enumerates some of the holy wells and fountains renowned for their miraculous powers.

Of talismans, amulets, and charms, our author gives an abundant supply of examples; and has usefully arranged them under the several diseases to which they have been, and continue in many cases still to be applied, in different parts of the world, and in our own country, specifying those which belong to particular countries. Our limits do not permit of an enumeration of those; but the reader will find the most curious under the heads of epilepsy, chorea, madness, plague, ague, rickets, child-birth, and cramp.

The chapter "on the Influence of the Mind upon the Body," affords numerous examples of the operation of the passions upon the health of the individual, and may be referred to for well-authenticated instances of the change of colour of the hair by the depressing effects of terror or grief; also of immediate death from the same causes. Apoplexy also from joy. Mr. P. makes some judicious remarks on sympathy, and the influence it appears to exert, more particularly between the mind and certain organs of the body, than with others. The effects of mental emotions and passions upon the heart are well detailed, and deserve to be perused to a great extent. Among the effects produced by the imagination, reference is made to Dr. Haygarth's exposition of the metallic tractors of Perkins, and an interesting case is told of a man labouring under paralysis, cured by the application of a thermometer beneath the tongue of a patient by the celebrated Sir H. Davy; the patient believing himself to be thereby subjected to the operation of some powerful agent, which he had been assured would effect his cure.

Of the "Royal Gift of Healing," a practice, which, strange to say, continued from the time of Edward the Confessor to Queen Anne, a period embracing seven centuries, Mr. Pettigrew has given the most ample account extant, and submitted the substance of various proclamations, registers, &c. that he has met with in the State Paper Office and British Museum. These are very curious, and the history is arranged under the several reigns in which the practice was exercised. A small sum of money (gold medal) appears first to have been given by Edward I. but no particular coin for the purpose was struck until Charles II. of which Mr. P. has given an engraving, as well as of those adopted by James II., Queen Anne, and the Pretenders. Henry VII. was the first sovereign to establish a particular service of ceremony to be employed at the healings, and it was continued, with variations, until the reign of Queen Anne, in whose book of Common Prayer the service is printed.

Elizabeth practised it, but appears not to have been anxious to exercise her privilege. It flourished most in the time of Charles I. and II. Mr. P. gives the substance of eleven proclamations relating to it in the reign of Charles I., and there is a register of cases treated by Charles II. from 1662 to 1682, amounting to no less than 92,107 persons. The forms and ceremonies observed on these occasions are given, and the authorities by which they are supported, among which are to be found the names of some surgeons of deserved celebrity in their day. Somewhat akin to the royal touch, the reported cases of Valentin Greatrokes and Samuel Leverett are noticed, and the volume concludes with an interesting sketch of the sympathetical cures of Sir Kenelm Digby, upon which Mr. Pettigrew remarks:—

"It is not at all surprising that cures of the description alluded to should soon be looked upon as the result of magic, incantations, and other supernatural means; and that the professors of the sympathetic art, therefore, should have been anxious to account for the effects by natural causes. Such appears to have been Sir Kenelm Digby's chief aim before the doctors of Montpelier; and similar reasonings upon the subject may be found in the writings of the supporters of the system already mentioned, who advocated the plan of treatment, and vouched for its efficacy. In this search for natural means to account for the phenomena obtained, the obvious one was overlooked; and the history I have given would be uninteresting but for the valuable practical lesson which these experiments have afforded. We owe to this folly the introduction of one of the first principles of surgery—one which, in this country, has done more to advance the science than any other beside—one which has saved a vast amount of human suffering, and preserved innumerable lives. The history of the doctrine of healing wounds by the powder of sympathy is the history of adhesion—the history of union by the first intention—a history which, until the time of John Hunter, was never fairly developed or distinctly comprehended.

"It has been well observed by the late Mr. John Bell, that 'it is an old, but a becoming and modest thought, that in our profession we are but the ministers of nature; and indeed the surgeon, still more than the physician, achieves nothing by his own immediate power, but does all his services by observing and managing the properties of the living body; where the living principle is so strong and active in every part that by that energy alone it regenerates any lost substance, or reunites in a more immediate way the more simple wounds.' A wound, in general terms, may be defined to be a breach in the continuity of the soft parts of the body; and an incised wound is the most simple of its kind. These, it must be remembered, were of the description of wounds to which the sympathetical curers resorted, and their secret of cure is to be explained by the rest and quiet which the wounded parts were permitted to enjoy, in opposition to the ordinary treatment under the fallacious doctrine and practice of that day in digesting, mundificating, incarnating, &c. Surgeons in former times seem really, by their modes of treatment, to have tried how far it was possible to impede instead of to facilitate the processes of nature; and to those who are acquainted with modern surgery it almost appears miraculous that they ever should have been able to have produced union of any wound whatever. What is the mode of treatment now employed by the surgeon in the healing of a wound? To clear it from extraneous matter, to bring the edges into apposition, to keep them in contact by a proper bandage, to modify temperature, and to give rest. What is this but the mode of procedure on the part of the sympathetical curers? They washed the wound with water, kept it clean and undisturbed, and in a few days the union of parts—the process of adhesion—was perfected, and the cure was complete. The doctrine of adhesion, the exudation of lymph, the junction of old, or the formation of new vessels, and the consequent agglutination of parts, was then ill understood: subtle and, in many instances it must be admitted, ingenious reasons were resorted to, to account for the effects produced, and the true solution of the process was overlooked—the effect was apparent, but the cause was obscure."—(P. 164.)

Numerous remarkable instances of adhesion of extensive surfaces, severed

parts, joints, &c. are given by our author, of whose work our readers will be able, from what we have noticed, to form a judgment. It is evidently the result of extensive professional and general reading, and, from the agreeable style in which it is written, likely to become popular, being equally adapted to amuse and instruct the historian, the antiquary, and the medical reader.

MEDICAL GAZETTE.

Friday, December 29, 1843.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

NEW CHARTER OF THE COLLEGE OF SURGEONS.

IT may be in the recollection of our readers, that in the third number of the current volume (Oct. 20, 1843), we gave a copy of the Charter recently issued by Her Majesty Queen Victoria to the Royal College of Surgeons of London, and bearing date Sept. 14, 1843. That charter directs, that within three months from the issuing thereof, the Council of the College do prepare and set forth a Schedule, containing the names of not less than 250 of the existing members of the College, who shall have been selected by them as fit and proper persons to be promoted to the style, title, and dignity of Fellows of the said Royal College.

Within the last week, as in duty bound, the College have put forth such a Schedule of Fellows. It will doubtless give occasion to much discussion, to many heart-burnings, to jealousies, and a vast amount of envy, malice, and uncharitableness. Why was A selected and B passed over? Why was M taken and N left, will be the general topics of inquiry, as well in London as throughout the provinces, for some weeks to come.

We think the present a most favourable opportunity for offering a few reflections on the general character of the new charter, and some brief criticisms on its chief provisions. Most of our readers have, probably, cast their eyes over the charter, but the profusion of words in which lawyers delight to clothe their ideas, may have deterred many from a close investigation of its details.

The principal changes which the new charter effects in the constitution of the College, have reference—1. To the formation of a body of Fellows; 2. To the composition of the Council or governing body; 3. To the election, admission, and continuance in office, of the examining body. We shall, in the first instance, consider these several points in detail, and in the order here specified.

1. The charter directs that prior to the 14th Sept. 1844, a body of Fellows shall be formed out of the *existing* members of the College, consisting of not more than 300, (of whom 250 must be nominated before the 14th Dec. 1843) and that they be associated in one general diploma, to be enrolled in the High Court of Chancery, and, wonderful to say, without payment of fees. On all future occasions, however, the honour of the fellowship is to be coupled with certain conditions. These are three in number, viz.:—1st, that the individual should have attained the age of 25 years; 2dly, that he should have passed such a special examination as the Council shall from time to time think fit, and by a bye-law direct; 3dly, that he should have complied with such rules as the Council shall in like manner, from time to time, deem expedient, and duly direct. The nature of these latter restrictions is not hinted at. Of the propriety of the first (touching age) no question can arise, but on the second condition declared by the new charter to be indispensable to the appointment of a Fellow, there will not only be a question, but unless

we grossly deceive ourselves, a most unanimous feeling of disapprobation among the whole profession, from Penzance to Berwick-upon-Tweed.

The Fellowship of the Royal College of Surgeons is an honour held out, and very properly held out, by the Queen, as a reward to those who have distinguished themselves either as authors, or as practitioners, or as discoverers, as men of general science, or of high character and reputation, or long standing in the profession. It is to the body of English surgeons what the order of the Bath is to the army. Is it fitting, is it decent, is it just, that men who have really thus distinguished themselves, should be subjected to a new ordeal in the shape of a second examination? Will they have the meanness or folly to submit to it? The proposed examination for the Fellowship must be either nominal or searching. If nominal, why retain the degrading ceremony? If searching, and calculated (as the recommenders of this strange proposition will probably tell us) to enhance the value of the diploma, then who will subject a character *already acquired* (for this is the hypothesis from which we start) to the risk of ruin?

In our apprehension this re-examination can serve no other purpose than to irritate, and give continual grounds for the suspicion of partiality. To obviate this latter objection (if the plan is to be persisted in), and if additional honour is really to be thereby acquired, let the wordy war take place in open court. Let a day be fixed, and the public be assembled, and let us hear Mr. Guthrie probing the surgical attainments, and the microscopical knowledge, of some grave general practitioner, who, at the age of 50, after thirty years of service, aspires to the dignity of a Fellow! The thing will not bear examination.

"It is a monster of so foul a mien,
That to be hated needs but to be seen."

And the more we see of it, the less we like and embrace it.

Why did not the Council of the College take example from their brethren of Pall Mall East, where no such enormity was ever proposed or dreamt of? The penultimate clause of the charter contemplates evidently the interposition of Parliament to give additional force to the enactments of the royal charter. We hope that this opportunity will not be lost, and that either by petition to Parliament, or by application to the Queen in Council, this most obnoxious and hateful clause may be expunged, and *drummed out*, as it richly deserves.

To this master sin of the charter some minor ones must be added. For instance: power is given to the Council to appoint hereafter (that is, after Sept. 14, 1844) to the Fellowship, persons who have not previously been *members*. Let *them* be examined by all means; but surely it would have been better, following the precedent of the College of Physicians, to have made the Membership the sole door of admission to the Fellowship, and thus have avoided all pretext for a second examination.

2. We come now to the composition of the Council. This, the governing body of the College, is to be augmented from 21 (its present number) to 24. The existing members of the Council are to continue *for life;* but it is expressly provided that all future members of the Council may be relieved from duty when they shall be found no longer fit for it. It is obvious that this most wholesome regulation is intended to provide against the continuance of such men as Sir William Blizard in office, so soon as age and infirmities point out, in language not to be misunderstood, the propriety of retirement. It would probably have been too much to expect from human nature, that the present members of the

Council should have voluntarily consented to such a sacrifice as the spirit of the new regulations evidently suggests. So we must let that pass, and be thankful that the Council have had so clear an understanding of what is good for their *successors*. We all remember how sensitive the Archbishop of Grenada was, when Gil Blas reminded *him* of the advance of years.

None but Fellows are eligible as members of the council, and not all of them; for the charter says that no Fellow practising midwifery or pharmacy, or who has been engaged in such disqualifying pursuits for five years preceding the day of election, shall be so eligible; and further, he must, in order to qualify for a seat at the council table, reside, and *bonâ fide* practise his profession of surgeon, within five miles from the Post Office in St. Martin's Le Grand. He cannot certainly live at Norwood or Hammersmith, and we have our doubts whether Hampstead Heath be within the prescribed limits.

We know that the exclusion of the general practitioners from a seat in the council will give great dissatisfaction. It will be said, why cast this stigma upon men whose crime is, that while doing all that you do, they do yet more, viz. supply the physic which others only direct. We hold, however, that the distinction is a just and valid one; and that he who devotes himself to the study of disease exclusively takes a higher place than he who (if he does his duty) divides his time between the study of disease and regulating the details of practical pharmacy. Let him eschew the cares and superintendence of the shop, and in five years afterwards he becomes eligible to the council board. The remedy is at all times in his own hands. We consider the council quite right here.

The case, however, is different with regard to practitioners in midwifery; and we are inclined to think that here is another blot in the new charter. Our reasons are these. The practice of midwifery is not an exclusive practice, like that of oculists and dentists. The purest accoucheurs that London now contains have had the education either of physicians or of surgeons. They know disease, and they know and treat it well. It is not likely that more than one or two such would ever be proposed for admission to the council; and we are quite prepared to say that the presence of one or two men, well skilled in the mysteries of midwifery, such as Mr. Blagden or Mr. Stone, would assist the deliberations, and promote the usefulness, of the council. Such men may be Fellows, and capable of assisting in the election of members of the council; but the charter declares them incapable of sitting at the council board themselves.

Again we say, why did not the council look to the practice of their friends in Pall Mall? Do they find any corresponding exclusiveness there? Do they not know that Sir Charles Clarke and Dr. Locock are among their most honoured counsellors; and that there is nothing to impede, but on the contrary every thing to encourage the belief, that in Sir Charles Clarke we behold an embryo president of the resuscitated college? We hope that the Queen may be induced to revise this clause of the charter before the seal of parliamentary authority be put to it. The Metropolitan University will afford a most convenient precedent (if one should be required) for the revisal of a faulty charter.

We come now to explain to our readers the machinery which the charter puts into operation for conducting the election of the council—that important body, to which is to be entrusted the entire government of the College, subject to no

control whatever, save that slight one to which we shall hereafter advert. It is obvious that these regulations may be very simple and very effective, but, on the other hand, they may be of such a nature, so involved, and so mixed up with essential conditions, but, at the same time, conditions so difficult of fulfilment, as to neutralize in a great degree the advantages which an elective council might be expected to draw in its train, compared with the system of *self election* which has hitherto prevailed. Whether the directions of the charter be of the simple or of the complex kind, is our next inquiry; but the details are tedious, and to enter upon them at present would exceed our usual limits. We will reserve them, therefore, for consideration next week, when the composition and mode of election of the examining body will also claim our attention. Some observations, too, may follow on certain apparent deficiencies in the charter, and on the principles which appear to have guided the Council in their selection of the 300 Senior Fellows of the College.

That, as a whole, the new charter is a prodigious step in the way of improvement cannot for a moment admit of doubt. It may not go so far as some even of the moderate class of reformers would wish, we are prepared to admit, but it contains the seeds of great good. It will promote a good understanding among the scattered members of the College, now a mere rope of sand, bound together by no common interest. It will raise the character of the British surgeon, high though it now so deservedly stands. The establishment of a select body of men, eminent for professional attainments, to be distinguished hereafter as Fellows of the Royal College of Surgeons, out of whom the governing and examining bodies of the College are ultimately to be formed, is of itself an immense step in advance, and we gladly hail it as such. We cannot, however, shut our eyes to the glaring defects of the charter; and our voice, feeble though it may be, shall be raised to effect those improvements in it, which, without impairing the needful efficiency of professional government, will promote that good feeling which ought to exist among the members of a liberal profession, and encourage them to see in their new charter the harbinger of professional peace.

MIDDLESEX HOSPITAL.

The election of an Assistant Physician took place yesterday (28th), when Dr. Seth Thompson proved the successful candidate. At the close of the poll the numbers were found to be,—

Dr. Seth Thompson . . .	368
Dr. Woodfall	242
Majority	126

Dr. Crawford, the former Assistant, was, as a matter of course, elected Physician. Dr. Thompson had not been a pupil of the Hospital, but had the support (we believe unanimous) of the medical officers.

WEST OF LONDON INSTITUTE FOR DISEASES OF THE EYE.

The final and a very uumerous meeting of this association, for approving and determining the constitution of this charity, was held on the 1st instant, at the residence of L. T. Flood, Esq., Belle Vue House, Chelsea, when a code of laws and bye-laws was adopted, and the following appointments confirmed:—

President.—The Earl of Denbigh.

Vice-Presidents.—The Earl of Carnarvon, the Earl of Errol, the Rev. Lord Augustus Fitzclarence, John Tollemache, Esq. M.P., J. H. Langston, Esq. M.P., the Rev. C. Kingsby, Rector of Chelsea, L. T. Flood, Esq., W. B. France, Esq., Thomas Edwards, Esq. LL.D. D.C.L., Benjamin Jones, Esq., E. J. Langley, Esq., Francis Chalmer, Esq., Otho Hamilton, Esq.

Medical Referees.—Dr. Hamilton Roe, Dr. J. A. Wilson, Anthony White, Esq., Thomas Callaway, Esq., Hale Thomson, Esq.

Consulting Surgeon.—John Scott, Esq.

Surgeons.—Mr. D. O. Edwards, Mr. A. B. Barnes.

Treasurer.—James Pitt, Esq.

Secretary.—Mr. A. Gall.

CASE OF

STRANGULATED INTESTINES,

FROM ROTATION OF THE SIGMOID FLEXURE —WITH REMARKS.

By Jacob Bigelow, M.D.

The Hon. Hugh S. Legare, Attorney-General of the United States, arrived in Boston on Friday, June 16th, and although fatigued by a hasty journey from Washington, was well enough to make calls on some friends in the evening. At 1 o'clock in the night he was seized with frequent abdominal pains, resembling those of colic, and called Dr. Thomas, of Washington, then lodging in the same hotel, to his assistance. During the remainder of the night, and the whole of the next day and night, he was affected with pains alternating with intervals of ease, without constitutional disturbance, and agreeing in character with those of previous attacks to which he had been liable for more than two years, the last occurring in March preceding. Various laxatives and enemata were resorted to, together with counter-irritants, but without removal of the constipation and pain.

Early on Sunday morning I was called to meet Dr. Thomas at Mr. L.'s lodgings at the Tremont House. I found him then suffering frequent paroxysms of pain, which he referred mostly to the lower abdomen, without distinction of side, but which sometimes mounted above the umbilicus. The pulse was at this time 60, the skin natural, with no tenderness on deep pressure of the abdomen in any part, no meteorism, no nausea. Opiates and other remedies were proposed to him, but declined, on the ground that laxatives and mechanical means had relieved his former attacks. During the morning two doses of Epsom salt, with infusion of senna and tincture of hyoscyamus, were given, with frequent enemata both aqueous and stimulating, without effect. The pains did not increase, but a troublesome degree of tenesmus made it necessary to suspend the enemata. Elastic tubes were passed throughout the rectum, and water injected through them in the manner recommended by Dr. O'Beirne, but they could not be carried into the sigmoid flexure. His strength meanwhile remained good, and his general condition stationary.

At 6 P.M. he was removed without difficulty to the house of a friend, where he was immediately put into a warm bath of 106 deg., from which he expressed great relief and satisfaction. He was then put to bed, and 60 drops of laudanum were administered in two doses. In about an hour, the relief not being perfect, 40 drops of Munn's elixir of opium were given, soon after which he fell into a quiet sleep, and so remained for about three hours. Conditional directions were given for repeating the opiate, but it was not found necessary till near morning, when he took 20 drops of the elixir, and slept an hour or two more. On Monday morning at 5 o'clock I found him more comfortable than before, skin temperate, pulse 64, abdomen not tender but beginning to be tympanitic. Castor oil and senna, with hyoscyamus, were now given and retained, and enemata, fomentations and sinapisms, were resumed as before. The pain did not return with the same severity as before, but meteorism rapidly increased, with restlessness and tenderness on pressure. At 9 A.M., the pulse was 80, and before 12 it was 100. The face of things having become very serious, Dr. Thomas being absent from the city, I requested farther consultation, and Dr. Warren was called in. The abdomen was freely leeched and rubbed with croton oil. Various ineffectual attempts were made to overcome the obstruction of the intestines by the introduction of various tubes, by inflation of the rectum with a bellows, and by the tobacco injection administered twice. Under this last remedy he said he felt excited, was stronger but more agitated, and his pulse rose from 130 to 140, with increased force. Each injection contained half a drachm in infusion, and was retained nearly half an hour without narcotism or prostration. During the night the patient was restless, retaining his muscular strength in a considerable degree, and frequently getting up to the close stool in the belief of an approaching evacuation. There was never any vomiting nor nausea; the mind was clear, and the natural decisive tone of voice continued. He complained occasionally of a sense of burning at the epigastrium and upper abdomen. About half an hour before death, he got up without assistance, and on lying down asked urgently for water. On receiving it, he pushed it away, saying it was filled with ants. A white paper was then shown him, to which he applied the same remark. On being told it was an illusion of sight, he put forth his hand for the glass, but missed it, said a few words incoherently, leaned back, and expired quietly at half past 5.

Autopsy, seven hours after death.— Externally the limbs were very rigid, and there was much lividity about the head and back. The abdomen was greatly distended. On laying it open the cavity seemed nearly filled by the sigmoid flexure of the large intestine, which extended across the abdomen into the right hypochondrium, and was in a state of such distension, that its external circumference was in one place fifteen inches. It had a dusky green colour, as if from commencing gangrene, but there seemed to be

no softening, nor diminution of the natural polish. The two extremities of the flexure connected with the colon above, and rectum below, were felt to be twisted together about the mesentery as an axis, into a firm cord or neck, about an inch in diameter; and on being carefully untwisted, the whole included portion was found to have made four turns, or two entire revolutions upon itself. There was no line of demarcation between the healthy and strangulated portions, nor was there any appearance externally of old disease about this part. The small intestine and the colon were moderately distended, but the rectum was rather contracted. The cavity of the peritoneum contained a small quantity of turbid reddish fluid, and in one place there was recent lymph upon the small intestine, but there were no other appearances of inflammation. Owing to the state of the body and the place of examination, the intestine was not opened, and no further dissection made.

Remarks.—Internal strangulation, we have reason to believe, is a fatal disease, except in rare instances in which a spontaneous restoration of the parts may under favourable circumstances have taken place. But the resources of art are for the most part unavailing, from our ignorance at the time of the nature and place of the lesion, and from the inaccessible situation of the part, unless by a dangerous operation, not to be justified under any diagnosis which can be seasonably made out. Among the various causes known to have occasioned strangulation, the rotation or twisting of the intestine is less common than some others. Yet in addition to the case which has now been described, two others have occurred in this city, under the observation of Drs. Homans and J. B. S. Jackson, the record of which I have seen, in which fatal strangulation occurred from the torsion or twisting of the sigmoid flexure.

Professor Rokitansky, of Vienna, in a work on internal strangulations of the intestines, divides these lesions into three species. Of these, the second species consists in the rotation of one part round an axis most commonly formed by some other part. It appears to be the result of his experience that rotation round the mesentery as an axis can happen only to the small intestine. But it appears from the case above detailed, and the two others above alluded to, that the large intestine is capable of undergoing this rotation, and from its anatomical position, no part seems more exposed to this change of situation than the sigmoid flexure.

From remarks made by Mr. Legare during his illness, it is believed that in some of his former attacks of colic and constipation, relief was obtained by the introduction of the elastic tube beyond the seat of the stricture. This happy result is to be ascribed to the spasmodic character of the obstruction then existing. But when the intestine is rendered impervious by mechanical strangulation, it is evident that an instrument would sooner perforate the coats of the canal, than admit of being forced through the closed and tortuous passage. In the present case, tubes, some of which were two feet in length, were introduced into the rectum, and water injected through them continually to facilitate their progress. But the more flexible tubes were bent into a coil in the rectum, and the more rigid ones were irresistibly stopped at the sigmoid flexure, and could not be further forced without danger of perforating the intestine, an accident well known to have followed injudicious and violent efforts.—*Boston Med. and Surg. Journ.*

CASE OF
ABSCESS THROUGH THE LUMBAR REGION OF THE BACK;

DISCHARGE OF TWENTY STONES.

By A. H. Perkins, M.D.

I send you enclosed, two (of twenty) stones discharged by an abscess through the lumbar region of the back.

The patient is a man of apparently good constitution, and has enjoyed moderate health for many years. About ten years since, he says, he had frequent pains in his back, and much acidity of stomach, which were removed by treatment.

In February 1842, I saw him, in company with Dr. D. Tabb, of Matthews County. A few months before a swelling had commenced in his back, just below the kidney of the left side, and continued to increase until this time. Poultices, &c. had been used, and now a fluid was perceptible to the touch. An abscess-lancet was introduced to the depth of an inch through the swollen part, and a considerable quantity of serous blood escaped, and continued to escape for several days. The poultices were reapplied, but owing to irregularity of treatment, a sinus of an unhealthy character was formed, which was cured with port wine injections, caustic, &c. No disease of the kidney was suspected. The digestion was good, urine tolerably clear, and the gentleman enabled to attend to his office of Sheriff throughout the whole period, and it was thought advisable to close the wound. It continued, however, tender, with occasional pain in the part, until December following, when it commenced rising again. Broke in March following, and discharged the stones above mentioned. The pain in the back was intermittent throughout the whole period, not much increased by pressure; the constitutional symptoms very slight; and the urine not more sedimentous

than occurs in slight febrile affections, and not constant in that situation.

The place is now open, discharging pus with a grisly substance protruding from it. I advised the application of caustic; constitutional treatment was refused, the patient being a Thompsonian.—*Philadelphia Medical Examiner.*

STATISTICS OF THE ROYAL COLLEGE OF PHYSICIANS.

To the Editor of the Medical Gazette.

SIR,

IN reading your excellent article on the Statistics of the College of Physicians, in the GAZETTE of to-day (Dec. 15), I observe the following.

"We do not clearly understand the cause of this sudden fondness in favour of the Extra Urban License of the College of Physicians. It seems to denote a wish to nestle under the College wings, but we suspect there is something at the bottom of this new-born zeal, more than we have been able to fathom. It is hardly worth while to inquire, for the class of Extra Licentiates is doomed to a speedy decay."

The foregoing may be regarded as an intimation that the Extra Licentiates are to be raised to the rank of Licentiates; without informing us how it is to fare with the present Licentiates. Are they to be raised to the rank of Fellows? or are they to remain a degraded class, in statu quo? Many of these gentlemen are of high standing and respectability in the profession, having passed the same, and consequently as good an examination as the "Fellows," and to them it would, indeed, be an act of injustice to thrust upon them a body of men, however respectable, who had not passed the same examination, and possessed the same qualifications.

To be consistent, the College must either raise the present Licentiates to the rank of Fellows, or allow the Extra Urbans to remain, as they are at present, a distinct grade.

I am sir,
Your obedient servant,
A LICENTIATE.

MUNIFICENT SALARY.

To the Editor of the Medical Gazette.

SIR,

I HAVE just seen on the fly-leaf of your last GAZETTE, a repetition of the advertisement for a "house-surgeon and apothecary to the Taunton and Somerset Hospital," by which it appears that "he must be a member of the College of Surgeons, and a licensed apothecary. He will be required to reside in the hospital, and restricted from practising out of it. Salary £50 per annum, with board at the matron's table," &c.

I am glad to find that it has been necessary to repeat this advertisement, inasmuch as it evinces that no gentleman, so educated and qualified, can be found who will disgrace himself and the profession, by acceding to the terms and wages of a servant out of livery.

I am, sir,
Your obedient servant,
J. C. BADELEY, M.D.

Chelmsford, Dec. 9, 1843.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, December 15, 1843.

J. Hales.—F. F. Dukes.—J. Phillips.—G. C. C. Lunn.—B. V. Asbury.—T. Ballard.—H. Terry.

Friday, December 22, 1843.

J. Burt.—P. T. Gunning.—W. A. Anderson.—R. K. Dunn.—A. Wade.—N. Ward.—M. Anthony.—N. S. Smith.—M. Balfe.—J. Horton.—V. Edwards.—T. Fleming.—J. S. Knight.—E. M. Foster.—S. H. Swayne.—C. H. Fasson.—E. P. Phillips.—D. Evans.—G. Cleveland.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, December 16, 1843.

Small Pox	10
Measles	38
Scarlatina	46
Hooping Cough	41
Croup	11
Thrush	4
Diarrhœa	6
Dysentery	2
Cholera	0
Influenza	1
Ague	1
Remittent Fever	1
Typhus	29
Erysipelas	4
Syphilis	0
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	159
Diseases of the Lungs and other Organs of Respiration	300
Diseases of the Heart and Blood-vessels	21
Diseases of the Stomach, Liver, and other Organs of Digestion	58
Diseases of the Kidneys, &c.	5
Childbed	7
Paramenia	1
Ovarian Dropsy	0
Disease of Uterus, &c.	1
Arthritis	0
Rheumatism	3
Diseases of Joints, &c.	3
Carbuncle	0
Phlegmon	0
Ulcer	1
Fistula	0
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	112
Old Age or Natural Decay	71
Deaths by Violence, Privation, or Intemperance	22
Causes not specified	9
Deaths from all Causes	967

WILSON & OGILVY, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, JANUARY 5, 1844.

ON PNEUMO-THORAX:

AN ESSAY,

Read (in part) at the Physical Society of Guy's Hospital,

By H. M. Hughes, M.D.
One of the Assistant Physicians to the Hospital.

Could a well-informed physician of the last century again appear upon the stage of active life, and investigate the progress made in pathology since his death, I scarcely know any complaint in which he would find a greater change of opinion to have occurred among well educated medical men, than that which forms the subject of the following observations. Should there be any professor of the healing art now living who entertains a doubt as to the advantages derived from what is commonly called physical diagnosis, combined with the active pursuit of morbid anatomy, in enabling the medical practitioner to arrive at a correct appreciation of certain symptoms, or the medical philosopher at just conclusions as to the nature and origin of certain diseases of the chest, I know not any complaint to which his attention might be directed with greater confidence than to pneumo-thorax. If such an individual will but compare the chapter of the great discoverer of the uses of auscultation, and almost equally great morbid anatomist, upon this subject, with the writings* of those who preceded him, I think he can no longer continue to feel or to express any doubt upon the matter.

Previously to the investigations of Laennec, pneumo-thorax was supposed to arise almost universally either from a secretion of the pleura itself, or from the decomposition of the fluid of empyema, or a suppurating lung. At the present time, all morbid anatomists agree that the gas, in a vast majority of instances, is introduced from without; all assent to the proposition that the secretion of elastic fluid by the pleura and other serous membranes is, to say the least, exceedingly rare; and some, while they deny not the possibility of such an occurrence, express considerable doubt if it ever occurs. "Nothing," says Andral, "is more uncommon than pneumo-thorax produced by exhalation from the pleura*." In all the cases he had seen, he says in one part of his work, "the existence of the gas in the pleura was the result of the existence of a pulmonary fistula," connecting the cavity of the serous membrane with the bronchial tubes. He subsequently, however, relates a case (No. 21) "presenting the very rare instance of an effusion of gas into the pleura without there being any communication between the cavity of this membrane and the exterior." Laennec recognised the decomposition of albuminous fluids as a cause of pneumo-thorax, and others of the French school of pathologists probably still maintain the correctness of this opinion. But as far as I have been able to ascertain by a careful perusal of his cases, Laennec appears to have retained it, and even to have considered this origin of the complaint "pretty frequent," simply because in the cases examined after death an opening communicating with the external air was not always discovered. His want of success in attaining this object I cannot but attribute in great measure to his neglect of the only certain mode of arriving at it; viz. the careful inflation of the lungs under water by the aid of the blow-pipe. There are, I believe, but few recent English writers who recognise the decomposition of effused fluids, and of blood, as a cause of pneumo-thorax. I think it indeed doubtful if any British pathologist would, at the present day, be willing to admit, or disposed to maintain, that in the living body such an amount of

* I have endeavoured unsuccessfully, both in Paris and London, to obtain the essay of Itard on Pneumo-thorax.

* Clinique Medicale, translated by Spillan.

decomposition of the fluids effused into serous membranes as to give rise to the evolution of gas, can take place without the access of the external air. "It may be laid down as proved," says Dr. Houghton, "that where pneumo-thorax exists the air has been introduced from without; for cases of an opposite description are so rare that they must be considered as exceptions to the rule*." There is much truth and candour in the following observation of the judicious Chomel. "Le presence d'une certaine quantité de gaz et de gaz inodre chez tous le sugets qui ont succombé à cette espece de pleurisie, (viz. from the opening of a tuberculous abscess) l'absence presque constante de ces gaz chez tous ceux qui succombent à une pleurisie ordinaire doivent porter à croire que dans les cas ou la communication du tubercle avec le bronches n'a pas été evidente, elle a pu neanmoins exister. Les medicins accouteemés aux recherches d'anatomie pathologique savent combien elles offrent quelquefois et particulierement dans des cas de ce genre, je ne dirai pas seulement de difficulté mais d'obscurité et d'incertitude."†

But though the views of physicians of the present day as to the nature of pneumo-thorax are very different from those current half a century ago, and though the very general belief exists among them that the gas is almost universally introduced from without, I have been a good deal surprised in my investigations upon the subject, to observe how various are the opinions of even recent writers upon some points connected with the disease, and how different have been the conclusions arrived at by some pathologists from those which have been deduced from the observations of others. Thus, the late Dr. Andrew Duncan‡ believed that "pneumo-thorax was commonly a consequence of empyema, or was preceded by it," while Dr. Houghton expresses an opinion that in a great majority of cases it proceeds from a tubercular cavity bursting into the sac of the pleura. Laennec, again, says that he never saw a patient affected with pneumo-thorax who was not confined to bed (alité). Louis, that life, in his experience, has not been protracted beyond thirty-six days, which he evidently regards as a long period. And Andral asserts§ "that it generally proves fatal in a very short time, though in some cases the patient has lingered as long as thirty days." How very different has been the experience of many on this side the channel!

Dr. Stokes records the case of a gentleman who not only lived for five months after it was proved that he was suffering from this disease, but who improved in health, and increased in flesh during that period, and stated that the only inconvenience to which he was subjected by his complaint was the splashing of the fluid, which occurred while taking exercise on horseback. He also mentions the case of a man who, when suffering more than usual from the accumulation of purulent fluid from the pleura, was accustomed to lie down upon his back and tilt his body by making a purchase with his feet against a wall, and who, by a copious expectoration thereby induced, was enabled to relieve himself from a portion of his inconvenient load. Dr. Houghton had a patient who not merely lived a year after the disease was known to exist, but who, notwithstanding the repeated cautions of his physician, would persist in following his employment of bricklaying, and was actually for some time engaged upon a wall near the hospital in which he had been confined. Some who now hear me, or who may subsequently peruse this paper, will probably call to mind the case of a man who, about eight years ago, was in Naaman's Ward of this hospital, who was evidently proud of the splashing noise he could voluntarily produce by shaking his body, and who was delighted by an opportunity of exhibiting to a passing pupil, in his progress down the ward, the phenomena of "Hippocratic succussion." This man, after having been cured of the catarrh for which he was admitted, spontaneously left the hospital, as he felt quite well enough to follow his ordinary occupation. He has not since been heard of at the hospital. Dr. Barlow, in the 4th vol. of the Guy's Hospital Reports, records the case of a young woman who, though weak and delicate during the winter, improved in health, and actually got fat, for three successive summers, and who lived for at least three years with the well-marked signs of pneumo-thorax. This is at once a very remarkable illustration of the very small portion of respirable lung with which life may be supported, and, I believe, the most protracted case of indubitable pneumo-thorax that has yet been recorded.

Seeing, then, that the experience of individuals in this affection has been so different, and has led to conclusions so various, I have thought that a brief general history of the complaint, founded upon cases already published, and especially upon those of which notes have been preserved in the hospital, together with the results of my own personal observation, would not be uninteresting to the members of this Society, and might not be altogether unacceptable to other members of the profession.

"In every case," says a late writer, "in which air, whatever its chemical constitution

* Cyclopædia of Practical Medicine.
† Dictionnaire de Médecine.
‡ Edinburgh Medical and Surgical Journal.
§ Pathological Anatomy, translated by Townsend and West.

may be, is contained between the pleura pulmonalis and pleura costalis, the disease is pneumo-thorax." According to this definition, which is, strictly speaking, correct, whenever, in the operation of paracentesis thoracis, a few bubbles of air pass into the cavity of the pleura, or when an empyema bursts externally, and air supplies the place of a small portion of the fluid which escapes, the case becomes complicated with pneumo-thorax. Such, however, is not, I consider, in the present day, the ordinary acceptation of the term. Such cases are not generally regarded by either British or foreign pathologists as examples of pneumo-thorax, as it is scarcely credible that Laennec should not have seen persons thus affected who were not confined to bed, or that Louis and Andral should not have witnessed individuals who had suffered from empyema with external fistula, or "open empyema," for months, and even years together. Upon this form of complaint, then, it is not my intention to dilate; such cases are more properly ranged under the term empyema. But as two instances have fallen under my notice, the histories of which were somewhat unusual, and involve considerations of great practical importance, I may, perhaps, be allowed briefly to refer to them.

Case I.—A woman, aged about 28, came under my care four years ago, as a patient of the Surrey Dispensary. She had the general symptoms of phthisis, hectic, nocturnal perspirations, cough, copious expectoration, great emaciation, debility, and a rapid feeble pulse, and also a discharge from two sinuses in the thoracic parietes on the right side, of which one was below the mamma; the other passed through a portion of the gland. The discharge from one or both of these sinuses alternated with the expectoration; when the one decreased the other increased in proportion. When the discharge from the side was profuse there was little or no expectoration; when the former ceased, or its passage became obstructed, the latter was very abundant. The side was contracted, dull on percussion, and destitute of healthy respiratory murmur. Over a small space below the clavicle alone was heard a little coarse and rough respiration. Tubular breathing and bronchophony existed posteriorly, and fistulous breathing anteriorly and inferiorly. The history which the patient gave of her complaint was, that after her confinement several months ago, she had a "bad breast," which was poulticed; suppurated, and burst spontaneously; and that very soon after this event she observed air proceed from the opening of the abscess; that she began to cough and expectorate, and had continued to do so, with gradually increasing debility, up to the time I saw her. She was ordered tonics and sedatives, and to continue the poultices to the sinuses. After several weeks, the discharge diminished, and the cough decreased, though her general health improved very slowly, and her debility remained nearly as great as upon my first visit. For the purpose of improving her general health, and that she might not be exposed to the harsh usage of a drunken and dissolute husband, she was now advised to go into the country, and was not seen by me for more than two years. After the lapse of about six and twenty months, a person applied to me at the Dispensary for some trifling stomach complaint. She was stout, sleek, and ruddy, and looked in such really rude health, that I was surprised she required the aid of the doctor. After I had made some inquiry, she said, "You do not recollect me, sir; I am the person you attended in Crosby Row. My husband died, and I have got another, sir, and have had a child, sir, since you saw me." Even after this statement, I could scarcely recognise in her the pallid, emaciated, sickly thing, I had formerly attended. She, however, told me that the discharge, cough, and expectoration, had ceased, and the wound had healed, but that she was occasionally troubled with flying pains in the side, and shortness of breath. I much regret that my engagements at the time prevented me instituting an examination of her chest, and that, being unacquainted with her address, I have since had no opportunity of doing so.

Case II.—Anne Johnson, aged 36, was admitted into Guy's Hospital, Sept. 21, 1841, with cough, expectoration, and discharge from the right side, immediately below the mamma, with all of which she had been troubled for ten months. The history of her complaint, and the symptoms and local signs of her disease, were so similar to those related of the last person, that I consider it quite unnecessary to detail them. She was occasionally attended by Dr. Barlow and Mr. Cock conjointly with myself. Mr. Cock, while adopting means to ensure a free opening for the discharge of matter, and thereby to favour the collapse and contraction of the side, was able to pass an elastic catheter four or five inches into the chest, and he was inclined to the belief that the cavity from which the discharge proceeded was situated, principally at least, in the lung itself. She continued in the hospital till March 10, 1842, and though little or no progress was made in the cure of her complaint, she left with her general health in no degree diminished by the long-continued drain to which she had been subjected.

Doubts may, I am aware, exist, as to the origin of the disease in these two cases, and a difficulty may be felt in deciding whether the empyema or the mammary abscess was the primary affection; as the information necessary for a correct determination of the question

was, in both cases, derived from the patients themselves. After repeated examination in each case, I was myself led to believe that the mammary abscess certainly preceded the affection of the pleura. The late Dr. Andrew Duncan* mentions a case in which abscesses of the parietes of the chest became emphysematous in consequence of communication with the bronchial tubes, and in which the fluid contents of the abscesses were expectorated through those channels. Thus it appears that though matter may always have a tendency to make its way to the surface, it does not necessarily take the most direct course; and it is clear that even in mammary abscess, as to the desirableness of opening which great diversity of opinion exists, "the line of road may sometimes be marked out" by the surgeon with great advantage to the patient.

Causes of pneumo-thorax. — Pneumo-thorax may arise from causes exterior to the lung, or from disease or lesion of the organ itself. Among the former set of causes may be mentioned,—

1. The fluid of an empyema bursting into a bronchial tube, and the inhalation of air through the opening by which the fluid escaped.

2. Laceration of the pleura costalis, combined with emphysema of the cellular membrane, arising from injury to, or ulceration of, the larynx or trachea.

3. A fistulous communication between some portion of the alimentary canal and the sac of the pleura, and perhaps—

4. Gangrene of the pleura connected with necrosis of a rib.

5. The decomposition of blood, and other albuminous fluids effused into the pleura, and,—

6. The gaseous exhalation of the pleura itself.

Of these the first is by far the most common cause of pneumo-thorax. Of the second I am only acquainted with one example; a case related by Dr. O'Brien in the Edinburgh Medical and Surgical Journal, Vol. 18. Of the third I have also met with but one illustration, in a case related by Dr. Stokes. Of the remaining causes in this division it may, I believe, at least be said, in Scottish phrase, that they are "not proven." Of the last, indeed, viz. the gaseous exhalation from the pleura itself, several supposed examples have occurred, during the progress of pneumonia, to some Irish physicians of high repute. I have not myself had an opportunity of witnessing any cases of this kind. I do not, therefore, feel myself qualified to offer an opinion as to the origin of the remarkable phenomena that have been observed; but, from a striking instance mentioned by Dr. Hudson, in the very valuable paper "on typhoid pneumonia," published by him in the Dublin Journal, in the year 1835, I think it sufficiently evident that the phenomena observed could not have arisen from pneumo-thorax. The patient, for many hours before her death, had a remarkably tympanitic resonance on percussion, and absence of respiration, similar to that existing in, and supposed to be pathognomonic of, the disease under consideration, on the side, and in the part previously affording distinct indications of a consolidated lung. She was seen by her physician six hours before her death, and the presence of the remarkable resonance was at that time verified; but upon inspection of the body after that event, not only was there no air in the pleura, but the lung was found consolidated throughout, and the pleura costalis and pleura pulmonalis *were universally and closely adherent by firm lymph of considerable standing.* I think this case is so well and so distinctly related—the facts are so precise, definite, and unanswerable—as entirely to settle the question of tympanitic resonance and absence of respiration necessarily indicating the presence of gas in the pleura. The hypothesis which Dr. Hudson, in the same paper, very modestly enunciates as a possible explanation of the phenomena observed, viz. that the tensely consolidated lung acts as a conductor to the sound produced by the vibration of the air contained in a large bronchial tube, which it surrounds (an opinion advocated by Dr. C. J. B. Williams, and others), appears to me, upon common acoustic principles, to be equally untenable. In the absence of farther and necessary observation, flatulency of the stomach and bowels seems to be the most probable source from which an explanation of the curious and interesting facts is to be derived.

The causes of pneumo-thorax connected with disease, or lesion of the lung itself, are the following:—

1st. The opening of a tubercular excavation into the pleura.

2d. The escape into the pleura of air through softened tubercular matter, communicating with a bronchial tube, but not connected with an excavation.

3d. Gangrene of the lung and pleura.

4th. Laceration of the lung and pleura from external injury.

5th. The bursting of an enlarged pulmonary vesicle from the violence of coughing, in emphysema of the lung.

Of all causes, probably the first of these gives rise the most frequently to pneumo-thorax. It may, however, admit of reasonable doubt whether, in all the cases in which a tubercular excavation is found to communicate with the pleura, the fluid contents of the vomica have passed into the serous membrane, and thus given rise to pleuritis and emphysema; or whether the

* Edin. Med. Chir. Trans. Vol. i. p. 458.

fluid of a previously existing pleuritic effusion may not rather have, by its pressure, caused ulceration of the intervening tissues, and thus, by being partially evacuated, have opened a passage for the admission of air—whether, in fact, the coexistence of a vomica, pneumo-thorax, and empyema. necessarily proves that softened tubercular matter has escaped into the pleural cavity.

The second cause above mentioned is probably the next in frequency to that already noticed. The accidental rupture or ulceration of the pleura over tubercles, and the consequent escape of air, sometimes occurs in the earlier periods of phthisis, even before much softening has taken place, and when very few tubercles are deposited in the lung. A curious case* of this sort is related by Dr. Townsend, in which only a "single nidus," containing six or seven tubercles, could be discovered in any part of the lung. Andral speaks of a similar example, in which, at most, six or seven tubercles were found in the lung, one of which, as large as a small nut, was unfortunately situated close to the pleura. Two cases, though of a much less remarkable character, will be hereafter mentioned. Pneumo-thorax from gangrene of the lung is a rare affection, and though a few cases have been stated to arise from external violence, it is remarkable, considering how comparatively frequent are wounds of the lung from pointed instruments or fractured ribs, and consequent emphysema of the cellular membrane, how uncommon is the complication of pneumo-thorax, as indicated by its ordinary symptoms and physical signs. The only case of pneumothorax arising from a rupture of the cells of an emphysematous lung, with which I am acquainted, is mentioned by the late Dr. Thomas Davies†.

In the following table is stated the apparent cause of pneumothorax in sixty-two cases, of which I have either examined the histories as related by others, or which I have myself witnessed. It may be necessary to state that I have included therein only one case which has not been examined after death; and none which have been barely alluded to, or of which the particulars have not been recorded. I have not, therefore, inserted the singular case of Dr. T. Davies, arising from rupture of the pleura and pulmonary cells in emphysema, or others arising from laceration of the lung. I may also observe, that when phthisis, and especially phthisical cavities, have coexisted with air in the pleura, I have assumed, in the absence of other obvious cause, that the tubercular disease has given rise to lesion of the pleura, allowing the admission of air, even though the aperture through which it had passed, had not been detected after death, especially as in some cases scarcely any attempt has been made to discover the opening, and though, as I have already hinted, it may perhaps be doubted whether in some others the vomica has really broken into the pleural sac, or an empyema burst into a tubercular excavation.

Causes of pneumo-thorax in 62 cases arising independently of external violence:—

Phthisis	47
Of these, fluid effusion is also stated to have existed in the pleura in	27
——— fluid effusion is not stated to have existed in	17
——— fluid effusion is stated not to have existed in	3
Empyema	8
Gangrene of the lung and pleura	4
Fistulous communication with the colon through the liver and diaphragm (from hydatids)	1
Uncertain, from being not mentioned 1; ,, not examined 1	2
Total	62

Symptoms of pneumothorax.—The escape of air into the pleura is said to be indicated by severe and suddenly supervening dyspnœa, pallor of the face, clamminess of the surface, coldness of the extremities, a frequent and fluttering pulse, and other symptoms of general collapse, together with pain of the affected side, and sometimes a sensation of fluid passing into the sac of the pleura. Of the seven cases related by Louis, the general symptoms occurred in all, and in six of the seven they were accompanied with local pain, while in one only was the sensation of the passage of the fluid experienced. It cannot indeed be denied that the accession of this complaint is in some cases marked by the sudden supervention of such symptoms; but it is assuredly likewise true that pneumo-thorax frequently occurs without them. When, indeed, a person previously suffering from phthisis, or even what is popularly termed "a delicate state of the lungs," is suddenly subjected to such a train of symptoms, and when they are accompanied, or followed by the signs afterwards enumerated, it may be pretty confidently asserted that air has escaped into the pleura. But from the observations of others, as well as myself, I may assert with equal confidence that pneumo-thorax may exist without any circumstances having been observed by the patient or his friends by which the exact period of its formation could be indicated. In support of this opinion, I may refer to cases by Drs. Stokes, Townsend, Houghton, Barlow, and others, as well as to some of those to be subsequently detailed in thispaper.

The general symptoms of pneumo-thorax,

* Transactions of the Associated Physicians and Surgeons, Dublin, Vol. 5.

† Med. Gazette, Vol. 5.

independently of those supposed to mark the period of its supervention, are neither very remarkable nor characteristic. They are hurried respiration, decubitus on the affected side, pallor of the face, an anxious expression of countenance, a small, feeble, and frequent pulse, cough, with more or less expectoration, and sometimes febrile excitement and pain of the side. Even if these symptoms were constant, they possess nothing of a distinctive character. But they are not collectively always present. Thus, though the favourite position of the patient is usually one considerably inclined to the diseased side, some lie indifferently upon either side, or upon the back, without increased distress or inconvenience. Though the cough is sometimes pretty frequent, it is occasionally so trifling and rare as altogether to escape the notice of the observer; and if previously troublesome, it sometimes decreases very perceptibly to the patient after the occurrence of the accident. Pleuritis and its accompanying pain and fever are sometimes occasioned by the escape of gas and tubercular matter, but it is either not a necessary result of the lesion, or is occasionally so slight as to escape observation.

But if the general symptoms are not distinctive, the physical signs are such as are not easily mistaken. They are, tympanitic resonance on percussion, and absence of respiration; imperfect elevation, or immobility of the ribs, and more or less enlargement, or altered configuration of one side of the chest; partial displacement of the heart and diaphragm; amphoric breathing, metallic tinkling, metallic resonance of the voice, and cough; and, if fluid likewise exist in the pleural cavity, Hippocratic succussion.

I do not think it necessary or desirable that each of these symptoms should be separately examined and discussed; but I feel that I am called upon, or at least that I am fairly entitled, without a charge of prolixity, briefly to state the result of my own experience in reference to several of them.

Tympanitic resonance on percussion, and absence of respiration, have been by some regarded as almost pathognomonic of pneumo-thorax. This opinion is certainly founded upon insufficient evidence, as I have myself seen more than one case in which the side, as a whole, was dull rather than resonant upon percussion, and in which, even locally, it was not more resonant than natural. I also several times examined one patient in whom the whole of the side was obviously, decidedly, and incontrovertibly, dull on percussion, but in whom the other indications of the presence of pneumo-thorax were at the same time well marked during life, and in whom the existence of the disease was verified by inspection of the body after death. I have also seen tympanitic resonance on percussion, and absence of respiration, in nearly the whole of one side, produced by the coexistence of a firm, airless, and contracted lung, and of a stomach largely distended with gas passing high above its ordinary level; and I feel assured that one at least of my colleagues at the hospital can bear testimony to the doubts and difficulties which may arise from this cause. The cases also of pneumonia, accompanied with tympanitic resonance, such as have been related by others, but, as I have previously acknowledged, have never been witnessed by myself, might likewise be advanced against the pathognomonic character of these signs. Occasionally also the lung is so bound down to the diaphragm and pleura costalis by old pleuritic adhesions as not to be removed by the subsequent effusion, and thus to admit, at some parts, of a little hoarse and indistinct respiratory murmur, which might render the existence of the complaint doubtful to those by whom *absence of respiration* is considered as its almost necessary accompaniment.

Insensibility of the side, or *imperfect elevation of the ribs*, is almost constantly present; but enlargement of the side, and partial dislocation of the heart and diaphragm, are far from being universal attendants upon pneumo-thorax. In some cases the shape and size of the affected side of the chest is unchanged, in others it is misshapen, contracted, and smaller than the opposite side, in consequence of old pleurisy.

Amphoric breathing, metallic tinkling, metallic resonance of the cough and voice.—The whole of these signs depend upon the shape and size of the aperture in the pleura, and the size and lining of the cavity into which it leads. Arising from the reverberation or echo of the vibrations producing the common sounds of tubular breathing, of the cough and the voice, they are necessarily modified by the circumstances which give rise to that reverberation, and become more or less distinct, and even disappear altogether, and re-appear, according as the cavity is large or small, or is more or less occupied by liquid effusion. Thus the common fistulous breathing which is present when a cavity is of small or of moderate size, acquires a metallic ringing character when the cavity is large. When a portion of mucus or of membrane partially obstructs the opening, or when a drop of bronchial secretions falls into the fluid effused, or again when the opening into the pleura is situated below the level of the fluid, and bubbles of air pass through it, and burst upon its surface, the curious phenomena of metallic tinkling are produced—a sound which, in its most perfect form, more nearly approaches to that caused by shaking a pin in a large bottle or decanter, than any other with which I

am acquainted. When both the cavity and the opening are large, the sound resembles that produced by blowing into a large wide-mouthed bottle, and constitutes amphoric breathing—" bourdonnement amphorique," or " utricular buzzing."

For the production of *Hippocratic succussion*, a large cavity and the presence of both air and fluid is necessary. It is the noise caused by the splashing of fluid in a confined space. It is heard only when the fluid exists in a quantity, considerable indeed, but not so large as nearly to fill the cavity and thereby exclude a necesary amount of air—little sound is produced by shaking a bottle which contains either a few drops only of fluid, or so much as nearly to reach the cork. Hippocratic succussion may be generally easily elicited in the following way, which, I think, causes less inconvenience to the patient than either getting an assistant to shake him by the shoulders, as originally recommended, or requesting the invalid to give a twist or jerk to his own body, as recently advised. Press the ear firmly against the part of a chest in which the sound is most distinct; grasp the body of the patient with one arm, then smartly swing both body and head to and fro, and suddenly stop the motion. By these means, undulations are caused in the fluid without violent agitation, and generally, if not too long continued, without any distress, fatigue, or inconvenience to the invalid.

Theory of the difference of Symptoms and Physical Signs of Pneumo-thorax. —I am induced to say a few words upon this subject, as it has appeared to me that the great variety in the continuance and severity of the symptoms, obviously in a great measure dependent upon the different physical conditions under which pneumo-thorax occurs, has not been hitherto sufficiently noticed, and that a more strict attention to, and just appreciation of, the diversified conditions of the organs in which it takes place, are necessary to a correct view of its pathological history.

If, between a bronchial tube and the sac of the pleura, a communication were made through which the external air was freely admitted into its cavity, and if the lung and pleura were both free from disease, the first effect of the operation would be a certain amount of collapse of the lung—the result of its proper elasticity. If, then, the ingress and egress of air to and from the pleura continued free, the lung, in consequence of the greater facility with which the air passed into the pleura, would be, as a whole, but little expanded upon inspiration, and that portion of it to which the injured bronchial tube was distributed, would not be expanded at all. Less blood would be sent to the organ, its functional activity would decrease, its size would be gradually diminished, and air accumulating in the pleura would slowly occupy the space. If, on the contrary, while the ingress of air to the pleura took place with facility, its egress therefrom were prevented, or effected with difficulty, in consequence of some obstruction—if, at each inspiration, air passed into the sac of the serous membrane, and its escape during expiration were, in great measure, prevented either by the situation or form of the aperture—it is evident that the complete collapse of the lung would be greatly accelerated, and that the distress experienced by the patient would *cæteris paribus* be proportionably great. If, however, a great part of the lung were already so diseased as not to admit of expansion—if a considerable portion were occupied by cavities, or consolidated, in consequence of pneumonia or tubercular deposit—or if it were in some parts already closely adherent to the diaphragm or pleura costalis, through former pleuritis—then it is clear that not only would there be less lung capable of being collapsed, and therefore that, other circumstances being equal, the alteration in the circulation and aeration of the blood would be necessarily less extensive, but also that the collapse of that portion which was still crepitant and expansible would be in some measure prevented by the diseased parts by which it was surrounded. The air escaping, under such circumstances, into the space of the pleura which was not adherent, would be limited in quantity; the extent of pulmonary tissue thereby rendered incapable of respiration would be comparatively small; the general distress resulting therefrom might be naturally expected to be comparatively trifling, and the physical signs would almost necessarily be less salient and characteristic. Now, I would ask, do not such diversified conditions really exist? Is it not true that pneumo-thorax may and does occur when very little disease exists in the lung, as well as when the organ is consolidated, riddled with cavities, or adherent nearly in every part; that the symptoms vary much in severity and duration, from distressing and alarming collapse, terminating in death after a very few hours, to the very chronic and scarcely observable affection, the approach of which has been unnoticed, and the duration of which extends over weeks and months, and even years? Is it not perfectly intelligible, upon the theoretical gounds that I have stated, that the accident which is the cause of speedy death to one should pass almost without notice in another individual* ?

* Since this was written and read, I have perused the clinical lecture of Dr. Barker on a case in St. Thomas's Hospital, curiously confirmatory of the observations made above.

I have reason to believe that pneumo-thorax exists in the latter stages of phthisis much more frequently than has been hitherto supposed, and that it is not recognized, from the simple fact of its not being accompanied with any peculiar symptoms.

If, again, a person distressed by the accumulation of the fluid of a simple empyema have a portion of that fluid removed through a natural opening into one or more bronchial tubes,—if, in fact, the operation of paracentesis be performed internally, and the air, which sometimes passes into the pleura in consequence of more fluid having been evacuated by coughing, and more space left in the serous cavity than can be closed by the defective resiliency of the ribs, or the imperfect expansibility of the lung, have free egress as well as ingress through a large opening,—then after the immediate effects of the operation have ceased, and the fear of suffocation arising from the ejection of a large quantity of fluid has passed away, the patient will, in all probability, be relieved, and in reality very frequently is relieved, by the accident.

In confirmation of, or rather in addition to what has been here stated, it has been suggested to me by my friend and colleague, Dr. Rees, that, as when a part of an organ, or if there be two, when one organ is rendered incapable of action by accident or disease, another part of the same organ, or its fellow, assumes a supplementary action, and thus in some measure, compensates for the deficieney thereby induced, as is frequently seen in pneumonia, and particularly in disease of one kidney; so the more extensive has been the previous disease of the affected lung in pneumo-thorax, the larger has been the supply of blood, and the greater consequently the functional activity of the opposite lung, and therefore that not only is less blood sent to it in addition to that which it had before received, but that it is already in a condition better fitted to receive it.

I believe, indeed, that it will be generally found that *cæteris paribus* the less diseased the lung, and the smaller, within certain limits, the opening into the pleura, the greater will be the distress on the occurrence of pneumo-thorax, and conversely, the more diseased the lung, the greater the extent of pleuritic adhesions, and the larger the opening, the less will be the anxiety and collapse after that accident.

I am not prepared to assert that this will be found universally true; but I can certainly state that in many cases where the symptoms have been very severe and well marked, and the disease has been rapidly fatal, there has been found comparatively little disease of the lung itself, and the opening into the pleura has been small or not discovered; and conversely, that where the accession of the complaint has been unnoticed, or indicated by slight symptoms; and the disease has continued for many months, extensive disorganization of the pulmonary tissue, which had pretty evidently existed previously to the accident, has been discovered after death. Dr. Townsend's case, and two which will be subsequently related, may be advanced in confirmation of the one position, and Dr. Stokes', Dr. Houghton's, Dr. Barlow's, and some cases appended to this paper, may be quoted in support of the other.

This leads me to say a very few words on the appearances presented by the opening into the pleura, the especial morbid anatomy of the affection. If no fluid escape from the lung at the time of the rupture, pleuritis does not necessarily follow, or the patient may die previously to its occurrence. When, as most commonly happens, pneumo-thorax arises from the bursting of a phthisical cavity, it is usually followed by pleuritis and effusion. The aperture is then generally situated in the upper lobe, or, as stated by Dr. Houghton, at the lower edge of the upper lobe, immediately below the thick pleuritic cap, or coating, which so frequently covers the apex of the lung in phthisis. The opening, as I have previously noticed, is sometimes to small, or so covered with albuminous matter, as not to be seen after even minute examination, and can only be discovered by the use of the blow-pipe, which rarely, and as far as I have hitherto observed, never, fails to disclose it. When the accident occurs, as in two examples to be afterwards mentioned, in cases of diffused phthisis without cavities, the aperture may exist in any part of the lung, as every part is almost similarly affected. I have seen one case, in which, though cavities existed at the apex, the aperture in the pleura was found in the inferior acute edge of the lung. After the disease has lasted for some time the opening sometimes increases in size, and its edges become rounded and obtuse. In Dr. Houghton's very interesting case in the Dublin Journal, there were several openings, one or more of which appeared to him to be undergoing a process of contraction, which might subsequently have led to their obliteration. When pneumo-thorax exists as a complication to empyema, the opening into the pleura is occasionally large, and appears as if lacerated; more frequently, however, there are many minute cribriform openings, by which the sero-purulent fluid oozes through the membrane into several bronchial tubes. When pneumo-thorax arises from gangrene of the lung and pleura, the openings are irregular and undefined, but generally large, loose, and flocculent.

[To be continued.]

ON THE

EFFECT OF THE COD'S LIVER OIL UPON STRUMOUS AND OTHER DISEASES.

By W. O. Chalk, Esq.

(For the London Medical Gazette.)

[Concluded from p. 419.]

Case XIX. — George Whitwell, æt. 11, admitted May 22d. Strumous hypertrophy, with abscess of the left elbow-joint; ulcer on the outer ankle; he is suffering under great derangement of the digestive organs. Having undergone the usual treatment with excellent effect up to July 19th, Ol. J. A. was prescribed: it produced nausea for the first three days; after this he felt no inconvenience, with the exception of a slight action on the bowels. He says that he began to feel stronger a few days after its exhibition; he has gained flesh, and his general appearance is that of good health. Discharged Oct. 25th, greatly improved in every respect.

Case 20.—George Clarke, æt. 14, admitted May 23d: phthisis. Extensive deposition of tubercular matter in the upper portions of both lungs, especially on the right side; strumous enlargement of the cervical glands, with ulcers; caries of several of the phalanges of the fingers and toes; ulcers on the legs and arms; he is in a dreadful state of emaciation and disease. This patient began taking the oil July 12th; at first it produced violent nausea and acted sharply on the bowels, even when the dose was diminished from ℥ss. to 3iij. Some time elapsed before he conquered his repugnance to it. He continued to improve very much up to Sept. 9th: during this period the wounds had become more healthy; his appetite improved; he felt stronger, and had gained flesh. After this the oil seemed to lose its effect. He was discharged Oct. 19th, rather better than when he came into the house; the pulmonic symptoms had certainly undergone no increase.

Case XXI. — Thomas Connor, æt. 9, admitted May 14th: strumous hypertrophy of the right foot, with caries of the bones of the arch; there is a large foul ulcer on its outer side, discharging a highly fetid and unhealthy pus; the left hand is hypertrophous, with caries of the last phalanges of the third and little fingers; he is in a state of extreme debility and emaciation.

July 12th.—Very slight relief having been obtained by other treatment, the oil was prescribed; the usual inconvenience followed its first exhibition. An almost immediate and beneficial effect was exerted on the local and general symptoms. He left the Infirmary Oct. 27, very much benefited.

Case XXII. — Wm. Murdock, æt. 9, admitted May 12: a very severe case of porrigo favosa, of five years' standing, with *lepitudo* of both eyes. As he had made very little progress up to July 20th, the oil was prescribed in the usual manner, which he continued taking up to the present date, Oct. 25th. He is now quite well. It is worthy of remark that this patient has been received into the Infirmary for the three preceding seasons, having never obtained more than partial relief.

Case XXIII.—Robert Brideson, (out-patient), admitted May 16th: caries of the inferior maxilla on the right side; the child is in a very debilitated state; several small portions of bone were removed during the time he was here last year. He had been gradually recovering up to July 29th (nearly the whole of the remaining portion of the jaw-bone having been removed during that time) when there was an evident tendency to caries of the opposite side, evinced by enlargement of the bone, heat and swelling of the soft parts, and impending suppuration. Ol. J. A. 3iij. was ordered to be given three times a day.

Oct. 23d.—He has continued taking it up to the present time. During the last fortnight the dose has been diminished to 3ij., as it acted too freely on the bowels. The disposition to caries on the left side has been fairly arrested; there is a sinus beneath the chin, and a small portion of bone at the symphisis, yet to come away, being the remains of the former disease; his general health is excellent, and he has gained flesh.

Case XXIV.—Henry Hough (out-patient), æt. 5, admitted June 2d, suffering under strumous enlargement of the glands on both sides of the neck.

Sept. 29th.—Ol. J. A. was prescribed in the usual manner, and persevered in up to the day of his discharge.

Oct. 21st.—His general health has undergone rapid improvement since he has been taking it, and the glands have recovered their natural size.

Case XXV.—Eliza Brand, æt. 23, admitted May 8th: a very enlarged state of the cervical glands on both sides, with ulcers; she complains of great pain; the head is bent forwards; any attempt to raise it adds materially to her sufferings; her general health is greatly impaired from derangement of the digestive organs; moderate pressure in the epigastrium causes acute pain; she has been ill seven years. The general treatment consisted in the application of leeches and blisters to the epigastrium, alterative aperients, enemata, tonics of sarsaparilla, colomba bark, wine, &c. The local remedies were lotio. acid. nit.

carrot, conium, and bread poultices, &c. Under this plan the symptoms (which were unusually obstinate) yielded, and though very weak, she was much relieved generally and locally.

July 29th.—The oil was prescribed (ʒiij. three times a day), which she persevered in taking up to Sept. 25th, when it was discontinued, as she complained of headache and constriction of the chest, which she insisted were produced by the Ol. J. A. Previous to this time she had recovered her health and strength, had gained flesh considerably, the glandular affection was greatly relieved, and the ulcers for the most part healed.

Oct. 16.—Recommenced taking it, and has continued doing so up to the present date, Oct. 23rd, without producing any unpleasant symptoms. During the interval of cessation she suffered from a severe attack of diarrhœa, which somewhat reduced her. She is, however, surprisingly recovered, considering the duration and severity of the symptoms. She states that the oil produced nausea for the first seven or eight days, and that it was full a fortnight before any beneficial effect was perceptible.

Case XXVI.—Anne Shepherd, æt. 22, admitted May 17: a large and deep-seated chronic abscess beneath the gluteal muscle extending about two-thirds of the way down the thigh beneath the fascia; the leg and foot are much swollen; she is unable to move the limb, and suffers severe pain at times; her general health is delicate; the disease commenced about two years since. After persevering in the usual treatment up to August 10, with considerable benefit, the symptoms suddenly altered for the worse; she complained of great debility, and there was a disposition in the abscess to point, indicated by increased pain, heat, redness, and swelling of the parts; the slightest movement in the limb caused great suffering. Ol. J. A. ʒss. was ordered to be taken three times a day; it produced so much nausea that she could only take one dose during the four and twenty hours for the first few days, afterwards it was continued as prescribed until Oct. 14th. During this interval her health had improved; she had gained flesh; the pain was relieved; the abscess diminished from absorption, and the swelling of the leg and foot much subsided; she now experienced a sensation of constriction in the chest, accompanied by pain and weight at the epigastrium after meals; the tongue was furred; the oil was omitted, and the bowels relieved by a mixture of sarza and colomba, with pil. hyd. chlor. co. grs. v. om. nocte. During the last five weeks an ointment of the iodide of mercury has been occasionally applied to the thigh, and gentle support given to the walls of the abscess by the many-tailed bandage.

Oct. 21st.—She can now walk with ease by the aid of crutches; is quite free from pain, and is in every respect greatly relieved.

Case XXVII.—Ann Hemming, æt. 14, admitted Aug. 5, 1843: strumous synovitis of the right knee-joint, with a large deposition of tubercular matter on the inner side of the thigh just above the articulation, forming a tumor of great size; hypertrophy of the left elbow, with abscess; it is much enlarged, she cannot flex the arm, and suffers severe pain in it and the knee at times; she walks with great difficulty by the aid of a stick; her general health is much impaired, from a disordered state of the digestive organs; she has been ill twelve months. As she improved but slowly under the usual treatment, the oil was prescribed Sept. 11, and continued up to the present date, Oct. 21st. The tumor has undergone a rapid diminution during the time, being scarcely one-third of its former size; the synovitis is relieved; she walks without a stick free from pain; the elbow is much better; her general health has undergone great improvement, and she has gained flesh.

Nov. 27.—Since taking the notes of this case, I have had an opportunity of seeing the patient. A further amendment has taken place under the exhibition of Ol. J. A. The knee is nearly of its natural size.

Case XXVIII.—F. S., æt. 10, out-patient, admitted May 15. Was here during last season, and obtained considerable relief; she has been suffering from disease of the right hip and knee joints for eighteen months past; there are two small sinuses on the outer side of the former, with slight discharge; and several ulcers around the latter, being the result of abscess; it is much contracted, and any attempt at flexion or extension causes pain. She has been subject to epileptic fits for several years past; these, however, have been far less frequent and severe than formerly; she has had but two attacks during the last twelve months; her health is delicate: as there was a tendency to a recurrence of the fits, the wounds not so well, and the digestive organs deranged,

July 29—Ol. J. A. ʒiij. ter. die. was prescribed: at first it produced the usual effect. She continued taking it up to Sept. 29th, with the most marked improvement in the general and local symptoms. After this it was suspended for a fortnight, as it acted too freely on the bowels and produced nausea.

Oct. 21st.—She has regained a considerable degree of motion of both articulations, and has no pain in the knee-joint on partial flexion or extension; the ulcers are

for the most part healed; her health is now excellent, and she has gained flesh surprisingly; her countenance, formerly pale, has now a ruddy aspect.

Case XXIX.—Eliz. Barret, æt. 12, admitted July 11th: a very contracted state of the right knee-joint, consequent on synovitis; the calf of the leg is closely flexed on the thigh; there is a small ulcer over the head of the tibia; her health appears to be tolerably good. The disease has existed twelve months. Local means only were used, and with good effect up to Aug. 16th. At this time the knee became painful, accompanied by swelling, heat, and redness. Ol. J. A. ter die was ordered, which produced nausea, &c. for the first two or three days. Two doses only were administered in the twenty-four hours, which gave the most decided relief.

Oct. 23d.—All pain, heat, and redness, have subsided; the articulation can be freely moved, causing no suffering; the angle of the contraction is much lessened; the ulcer is smaller, but still unhealed; she has gained flesh and strength.

Case XXX.—Phœbe Stodhart, æt. 10, admitted Sept. 11: incipient phthisis; the right lung is the seat of tubercular deposit, and small cavity at its summit. She has no cough; the digestive organs are much deranged; there is a superficial malignant ulcer on the right cheek, about the size of a crown piece, exceedingly irritable and painful, with an ichorous discharge, forming a tough scab; it is much allied to lupus in its character. Ol. J. A. was ordered to be taken three times a day; the scab was removed daily with a pair of small forceps, and afterwards dressed with ung. hyd. iod.: occasionally hyd. iod. was applied in powder, and sometimes a saturated solution of iodine and hydriodate of potass by the aid of a camel's hair pencil. This plan of treatment was pursued until she left the Infirmary, Oct. 24th. Her general health was greatly improved, and she had gained flesh: there was no increase in the pulmonary affection; the ulcer had lost its malignant character, and was diminished in size.

Dec. 3d.—Since writing the foregoing remarks, I have seen this patient; the same treatment has been pursued, with further success; the ulcer is fast healing, being about the size of a shilling.

Case XXXI.—Susan Oram, æt. 10, admitted May 11th: strumous enlargement of the cervical glands, with ulcers; the digestive organs are much deranged: she has been ill three years. Under the application of leeches to the epigastrium, aperients, alteratives, tonics, &c. together with a suitable local treatment, she improved considerably; but as she still suffered from occasional attacks of headache and obstinate constipation, the tongue being furred, countenance sallow, and the ulcers unhealed, July 20th, I prescribed Ol. J. A. ℥ss. ter die, which gave rise to the usual inconvenience for the first few days.

Oct. 23d.—She has continued taking it with regularity up to the present date, and is quite well. The ulcers are healed; the headaches have ceased; the constipation is relieved; the tongue clean; her countenance clear and healthy, affording a great contrast to its former sallow hue, and she has gained flesh.

Case XXXII.—E. H., æt. 4: is suffering severely from porrigo, affecting the scalp and face (P. larvalis); her general health is greatly impaired, and she is much emaciated.

July 20th.—Three drachms of the oil were ordered to be given three times daily. She has continued taking it up to the present day, October 21st, and is quite well.

Case XXXIII.—Sophia Day, æt. 5: strumous ophthalmia of a very severe character. The corneæ are ulcerated; there is onyx of the left eye; the deposition extends nearly half way up the cornea; the conjunctival vessels are gorged; eyelids swollen; great intolerance of light, and profuse epiphora. These symptoms are accompanied by low irritative fever. It was quite clear that unless prompt relief were afforded, loss of sight of the left eye must speedily ensue. A grain of calomel was ordered to be given every two hours; a leech to be applied to the left lower eyelid, and the bleeding to be promoted for some hours; careful exclusion of light, and perfect rest. On visiting the child in the evening, I found that the person who had charge of her, had, of her own accord, administered three tea-spoonfuls of Ol. J. A. which, together with the calomel, had acted freely on the bowels, and relieved the eyes very much. I directed the dose of the oil to be repeated early in the morning, and other treatment to be discontinued. On going the following day, I found the patient sitting up; the intolerance of light and flow of tears had greatly abated; the conjunctival vessels were less gorged, and the swelling of the lids had in a great measure subsided. The oil had been given as directed, and by 11 o'clock A.M. (the hour of my visit) had again produced several motions: from this time (July 22d) it was administered with regularity three times daily. In less than four days from its exhibition, the conjunctivæ had regained their usual whiteness; ulcers on the cornea had taken on a healing action; the deposition in the left eye was completely absorbed, and the febrile symptoms entirely allayed. She continued taking the oil with the most marked benefit until September 15th, at which time it produced nausea and a very relaxed state of the bowels.

It was resumed October 7th, and continued up to the present date, October 21st. The eyelids alone remain slightly affected; she has gained flesh and strength; her appetite is excellent; tongue clean, and pulse natural.

Case XXXIV.—Emily Drummond, æt. 17, admitted May 15th: enlarged cervical glands and strumous ulcers: began taking the oil in doses of ʒiij. twice a day: it produced languor, heaviness, headache, and sickness. The quantity was diminished to ʒj., and continued at intervals for eight weeks; but at the end of that time she ceased taking it, as these symptoms became urgent.

Case XXXV.—Sarah Smith, æt. 35, admitted August 31st: pompholix of five months' standing. The Ol. J. A. was prescribed in ʒiij. doses. Violent vomiting and purging, with prostration of strength, ensued, and lasted for several hours.

Case XXXVI.—Palisia Lloyd, æt. 9, admitted July 15th: strumous abscess in the left thigh; great debility and emaciation. She had suffered from diarrhœa a fortnight previous to taking the oil. It recurred with violence, accompanied by severe vomiting, after taking one dose.

Case XXXVII.—James Sheppard, æt. 41, admitted May 11th: rheumatic affection of the right hip-joint, with effusion within the capsular ligament Dyspeptic symptoms followed the exhibition of the Ol. J. A. viz. weight in epigastrio, sickness, headache, constriction of the chest, and constipation. No beneficial effect was produced on the local disease.

Case XXXVIII.—James Deady, æt. 13, admitted: tabes mesenterica, enlarged cervical glands, diarrhœa: he is much debilitated and emaciated. The oil was prescribed some time after the diarrhœa had ceased. The first dose produced a recurrence of it, violent vomitings, and great prostration of strength.

Case XXXIX.—Henry Ashley, æt. 35: rheumatic ophthalmia, granular eyelids, great intolerance of light. The oil produced dyspeptic symptoms, which were followed by an increase of the ophthalmia.

Case XL.—H. Emptage, æt. 53 (mariner), of Margate, out-patient: enlarged liver, incipient ascites, strumous enlargement of the cervical, axillary, and inguinal glands, deposition of tubercular matter at the summit of the right lung. The oil was exhibited some time after he had recovered from a severe attack of English cholera. A table-spoonful of the oil reproduced it, and was followed by great prostration of strength.

ON A

RELATION EXISTING BETWEEN THE SITUATION OF HAIR UPON THE HUMAN BODY, AND CERTAIN SUBJACENT TISSUES.

By Thomas Haworth, M.D.

(For the London Medical Gazette.)

"In the study of anatomy, every man proceeds on the axiom, that nothing in the body of an animal was made in vain; and when he meets with a part of which the use is not obvious, he feels himself dissatisfied till he discovers some at least of the purposes to which it is subservient." It is unnecessary to say that the situation of the various patches of hair on the human body cannot be referred to mere accident, there is some special reason why hair should abound on one part of the body, and be absent or scanty on another. I think it may be shown, that generally speaking hair is the most plentiful in those situations where bone, tendon, fascia, or cartilage, lie near the surface.

The head affords the most striking example. The cranium has very little fleshy covering, and is accordingly supplied with a plentiful growth of hair. The forehead, indeed, is bare, for if it were otherwise vision would be interfered with. This exception, however, tends in a singular manner to confirm our position that some relation exists between the site of hair and the subjacent tissues, for very generally the margin of the hair at the upper part of the forehead imitates pretty exactly a line drawn along the junction of the belly of the frontal muscle, with its tendon; the upper part of each division of the frontal muscle is rounded, and its tendon, of course, bounds the rounded portion of each, dipping between them towards their junction at the middle of the forehead; the hair very frequently does precisely the same, forming a projecting tongue at the summit of the forehead. This similarity is too remarkable to be the result of accident.

At the back of the neck we may observe the growth of the hair descend in the form of three processes; two of them upon the insertions of the splenic muscles, and the other upon the cervical vertebræ; in the last situation, we

have in quadrupeds the coincidence of the ligamentum nuchæ, and the mane.

The whole course of the jaw-bone is marked out by the whiskers and beard, a prolongation proceeding to the malar bone, which stands out exposed. The point of the chin having no muscular covering, exhibits an earlier and more plentiful beard than the neighbouring part, the skin on each side covering the depressor labii inferioris being comparatively bare. This tuft being the first promise of manhood on the chin, is very much cherished by the rising generation. The cartilage of the larynx is very generally protected by an extension of the beard.

After the cranium, the sternum presents the largest surface of bone which is but slightly covered with fleshy parts, and, in obedience to the rule with which we started, it receives a covering of hair. It is to be observed that the tendinous origin of the pectoralis major becomes broader at the upper part of the sternum, and that there is often a corresponding increase of hairy surface at the same place.

We now come to the abdomen, the parietes of which, at the lower part, are almost entirely composed of tendinous substance. Here, also, we find hair extending upwards along the linea alba, forming a patch of hair of much the same shape and size as the tendinous expansion of the abdominal muscles.

The exposed aspect of the foot and hand have also hairs growing on them.

When patches of hair occur in unusual situations, the same coincidence is frequently observed. Thus I have seen the acromion processes covered with hairy epaulettes, and the whole length of base of the scapula fringed with a narrow line of hair. There is a portion of the posterior part of the ribs, near the lower angle of the scapula, which in one part is covered only by the tendinous insertions of the sacro-lumbalis muscle, and in another has only a thin additional covering from a part of the latissimus dorsi; on this spot I have seen a patch of hair. The os sacrum is sometimes similarly covered.

The above coincidences of the occurrence of hair in places where bone, cartilage, fascia, or tendon, lie near the surface, are, I think, too numerous to be accidental. If we take a connected view of the three great cavities of the body, the cranium, thorax, and abdomen, we shall be forcibly struck with this coincidence. The parietes of all receive a covering of hair in those places where there is little muscular substance; that is, where bone, cartilage, fascia, or tendon, lie near the surface: we have hair on the head, on the sternum, and on the abdominal fascia. There are, no doubt, exceptions to the rule, but they are neither numerous nor important, and are not sufficient to neutralize the instances in accordance with it.

It is easy to conjecture the final cause of this coincidence. The abovementioned tissues have this in common, that *they are all scantily supplied with blood.* Without an extra protection, therefore, the temperature of the integument covering them, and of the parts underneath, would rapidly approach that of the external air. The aching cold felt when the forehead, chin, and other parts similarly circumstanced, are exposed to a low temperature, must be familiar to every one. The exposure of a bald or shaven head to intense cold, no doubt injuriously affects the functions of the brain, unless it is applied as a remedy in cases of undue vascular excitement.

Here it will not be out of place to make some observations on the common practice of applying cold to the head. It will be readily understood that, as there is nothing intervening between the integument of the head and the brain, except a thin muscle, bone, and thin membranes, which can generate little heat, but which, being dense, can conduct it rapidly, the application of cold to the forehead and shaven head must cool the brain almost as quickly as if it were applied directly upon it. This fact should teach us to be circumspect in using this remedy. It would seem to be the prevailing opinion that the brain is in a blaze whenever there is headache or any affection of the nervous system, and that we must proceed to extinguish it with the activity of a fire brigade. The peculiar nature of many of the nervous symptoms may perhaps account for this practice. When a patient has presented to his imagination objects of the most dazzling colour, and declares he is surrounded with flames of fire, we are nearly inclined to believe that the source of these vivid sensations, the

brain, must be a fiery furnace indeed; forgetting that the aurora borealis is most and best seen in the cold atmosphere of arctic regions. In short, the sensations above mentioned may arise from an exhausted and collapsed brain, when the constant application of freezing cold would most probably produce injurious effects, and where it would be judicious to maintain a moderate warmth of head. It is probable that, in hypochondriacal cases attended by a sense of weight, pressure, constriction and pain, warm and stimulating applications to the head might give relief. The recommendation to keep the head cool and the feet warm is not applicable to all cases; there are many where both should be kept warm. Nature had some motive in providing the head with a covering of hair. When it is judged expedient to apply cold lotions to the head, they ought to be such as are capable of being entirely evaporated. If vinegar be used, it should be distilled or pyroligneous acid diluted with water. By the use of common vinegar, the head is liable to become varnished with a coating of mucilage, causing an injurious interruption to the functions of the skin. Lotions composed of the solutions of salts are objectionable when applied to the head, as they leave a crystalline incrustation. In short, whatever lotion is employed should have no residuum after evaporation—no *caput mortuum* attached to the living head. I would refer to Dr. Graves' "Clinical Medicine" for some useful observations on cold and warm applications to the head.

It is scarcely necessary to say that the brain will as readily feel the application of heat to the shaven head as of cold; and for the same reason, the woolly-headed negro is perhaps more in need of means to prevent heat from passing from without inwards, than the inhabitants of colder climates are in need of a provision for a contrary purpose. To the bare-headed a plentiful growth of air may be considered a protection against a *coup de soleil* in tropical climates.

We may suppose the whiskers and beard to protect the dental nerve while within its bony canal; and the frequency of toothache may in some degree be attributed to the natural absence of this covering, or to the practice of shaving. It is certain that neuralgia attacks most frequently the nerves of the face, these being more exposed to varieties of temperature, from their nearness to the surface, than other nerves. The liability of nerves being affected by exposure to cold is proved by the numerous recorded cases of paralosis of the portio dura of the seventh pair, arising from that cause; and we may venture to assert, that if the face were allowed to retain its natural clothing of hair, such cases would not be so apt to occur. It would be interesting to ascertain whether nations, as the Turks, who permit the beard and whiskers to luxuriate, are more exempt from toothache, tic douloureux, paralysis of the seventh pair, &c. than those which are in the habit of shaving. I have the impression that the teeth of Turks are remarkable for their sound condition. It is a prevailing opinion that a tendency to sore-throat is corrected by allowing the hair to grow under the chin.

We may appreciate the benefit to be derived from the sternum being supplied by an extra retainer of heat in the shape of hair, from the fact that travellers exposed to cold often protect the front part of the chest with additional clothing.

The growth of hair on those parts of the abdomen under which lie tissues scantily supplied with blood, as tendon or fascia, would appear more intended to maintain the harmony and consistency of nature, than to confer any effective benefit in supporting the warmth of the abdominal viscera.

It is worth while observing that we often artificially protect those parts which are naturally covered with hair; there is the rheumatic head and jaws enveloped in flannel; then there is the coachman, with his chin immersed in his voluminous neck-cloth; and well he may, for what supply of heat can be expected where there is little else but skin and bone, and where the razor has done its work? Who has not felt the pain of a cold chin? Lastly, how often do we see the consumptive patient remove a hareskin, or some other covering from his sternum, before examination of his chest?

The knee consists of a mass of bone and cartilage, and is destitute of muscular covering, and there being thus a deficiency in the means of generating heat, it is consequently liable to suffer

from cold in cases of failure of the circulation. Sir B. Brodie, I believe, attributes the greater frequency of disease of the knee over that of hip-joint, to the latter being well protected with a fleshy covering.

Since we have such a useful office for the beard and whiskers, it may be asked why women are without them. I can only answer that they are not provided with the same means in other respects of resisting injurious agents as men are; nature has adapted them morally and physically for a domestic life; their long period of gestation, and the constantly recurring wants of infants, together with their protracted helplessness, pointing out that to man must be left to bear the inclemencies of the weather, and to sustain the fatigue of out-door labour.

It is not easy to assign the efficient cause for this juxtaposition of hair and tissues. The composition of bone, cartilage, tendon, and fascia, is kindred with that of hair. The animal ingredient of all is composed of protein, ammonia, and oxygen, in varying proportions, according to Scherer; and bone earth, I believe, as a mineral ingredient, also enters into the composition of all. It is possible, therefore, that the above tissues may supply materials for the growth of hair to integuments lying immediately over them, by means of imbibition, or in some other way with which we are not acquainted.

CONTRIBUTIONS TO ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.

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[Continued from p. 367.]

Hermaphroditism: a Memoir read to the Royal Society of Edinburgh in 1827 *and* 1828.

Part III.

EXAMINATION OF THE DUCTS OF MALPIGHI, SHEWING THEM TO BE THE VASA DEFERENTIA.

When we examine the female organs of generation of the human species, we observe the parts to be such as I have described them in the preceding section of this memoir. But in the internal organs of generation in certain animals, such as the cow and pig, and I presume in others in which the structure may not have been looked to, we find almost always present two elongated, and not unfrequently interrupted tubes or ducts running parallel with the horns and body of the uterus, and generally communicating with the vagina close to the orifice of the urethra.

The interior of these tubes seems to be lined by a mucous membrane; they never communicate either with the ovarian or fallopian tubes by the peritoneal extremity, and on this point the ancients, who knew well their presence, as has been abundantly shewn in the preceding part of this memoir, committed great errors, and made assertions in no respect true, nor borne out by the anatomy of the parts. Their anatomy is very simple: Bauhin has described them; he followed Galen, and was followed by Malpighi; they have been seen by, and are known to, all anatomists, and the attention of the physiologist was particularly directed towards them by Dr. Gœrtner, but unsucessfully, inasmuch as no new facts were brought out by him, and thus the subject remained as mysterious as ever. It is sufficiently curious that modern observers should even have retrograded in their knowledge of the anatomy of these ducts, since in despite of the observations of all anatomists, two excellent zoologists, who may be supposed to speak the language of the school to which they belong, have denominated these tubes or ducts, utero-vaginal. The fact of their never communicating with the uterus has been admitted by all exact anatomists. They continue to be called the ducts of Malpighi, although he neither discovered nor described them well. Moreover, he fancied them to be female organs, though they be truly and strictly male.

Description of the ducts.—The minute verbal description of "the ducts," as they usually appear in the cow and pig, laid before the Society during the reading of the memoir, need not for obvious reasons be repeated here.

Description of the preparation.—This description, I regret to say, I am forced to give a good deal from recollection. On referring to my notes, I find

that no very minute account of the structures has been preserved; the preparation being before me when I described it to the Society.

Moreover, I unadvisedly dried the preparation after injecting "the ducts" with quicksilver, filling thus very fully the glandular structure of the testes to which these organs led, and thus I cannot return to it with any hopes of correcting any error I may commit by redescribing the preparation. I have thought these remarks due to the reader and to myself. (1843)

The uterus and internal organs of generation generally, together with as much of the external as could well be removed, belonging to a pig, which during life had distinctly shown an appetite for both sexes, were sent me by my friend, Mr. Alexander, of Preston Pans. The animal was when slaughtered about 14 months old, and weighed 15 stone Dutch weight: the skin was remarkably thick and coarse, and although it had been well fed, was far from being fat: in temper it was ferocious, and according to the written account I received with the specimen, it did not discharge its urine in the usual way of either male or female, but between the hind legs; a clitoris, or, as it is called by the reporter, a penis, might be seen here, and the entrance of a vagina.

"It was possessed of a very strong desire as a male for propagation, and at certain seasons, by the appearance of the vagina, nature seemed to operate upon it as strongly as upon a female."

(Signed) T. Alexander.

The above is all the information I received with the structures.

On examining the structures themselves, I find an imperfect penis; the vagina and uterus normal; the fallopian tubes defective, but not altogether wanting; "the ducts of Malpighi" in their usual place, and filled with a whitish fluid: on being injected with quicksilver, this penetrated easily, and on both sides, filling organs which proved to be two fully developed testes, with an epidydimis, numerous seminal tubes, blood-vessels, &c. Connected with these testes intimately there lay above and towards the inner side two other organs, that is, one on each side, whose structure could not be well made out. They seemed to me, in fact, to be ovaria: a hasty conclusion, I admit, since, so far as I can recollect, neither a distinct parenchyma, nor well-formed fimbriated extremity of the tubes leading towards them, could be made out. I regret exceedingly that a more minute examination was not made when the parts were fresh, and the drying of the preparation, with a view to its exhibition to the Royal Society, renders any return to it, with this view, impossible.

The inferences I draw from these observations and structures are, that this animal was to a remarkable degree hermaphrodite; that its œconomy and form were influenced deeply by the presence of male and female organs; that it could act as a male, and propagate as a female, may or may not be admitted, as not being essential to the question. Were female organs present together with the male parts? No one can doubt this; and though the absence of the ovaria, if they really were entirely absent, deprived the individual of those powerful regulating organs which constitute the female, affect the structure, her feelings, and, speaking of the woman, her moral existence, alter and change the proportion even of the skeleton; admitting that these organs were absent, still the uterus was present; and although no one in the present day will allow the accuracy of that aphorism of Hippocrates which says, "propta solum uterum mulier est quod est," it cannot, I think, be reasonably doubted that the presence of the female organs, including vulva, vagina, and uterus, with the appendages ligaments, implied a high approach to hermaphroditic structure.

The organs of generation, both in male and female, are frequently present only in sections; and they influence the structure of the whole frame in sections also. Thus we may have one side of the body of female form, the other side male; a portion of the pelvis male, and another female; the vagina may be complete or interrupted; and the uterus present or absent in both cases, or partially so; the presence, in short, of any organ or portion of the generative organs does not necessitate the presence of others; but we shall consider this exceedingly interesting subject in the concluding part of this memoir. This preparation, then, has disclosed to us the fact, singular and extraordinary in

itself, that in the females of certain animals the male vasa deferentia are almost always present*; that they have been mistaken for female organs for 2000 years; they offer us a key to the laws of hermaphrodism. They explain nearly all the phenomena of hermaphroditic structure, from the free-martin of Mr. Hunter to the perfect human hermaphrodite of Petit. When I have next the honour of addressing the Society I shall shew that the theories which teach us that hermaphrodites are imperfectly developed males, or imperfectly developed females; that the embryo is at first of no sex; that the male and female organs are identical, synonymous, and convertible into each other in the embryo state; and that deviations from the regular structure in man are proofs of his being *forced*, during the fœtal growth, to pass through the various grades of animal organization, are doctrines partly devoid of foundation in truth, or are purely abstract and metaphysical; and if admitted to be abstract and metaphysical, do not even then correctly express the great transcendental law of *types of animal form* intended to fill all *material space* known to men, and types of animal organs, or of an apparatus of organs intended to perform a similar or strictly analogous function: all which forms or types being included in the great formative idea, do not *require* to be constantly reproduced in the embryonic forms of man, or of any other animal, necessarily: the type of the respiratory organs, for example, is in all embryos double, that is, aerial and aquatic, pulmonary and branchial; nor, in order to prove this, is it necessary to suppose that the human embryo is *forced* to pass through lower grades of organization to a higher; neither can it be reasonably required of any anatomist to prove the existence of the rudimentary organs in all and every case; it is surely suffieient that such occasionally exist. In like manner I say of the generative apparatus, this type is double, is hermaphrodite, in fact. We see it so in plants and in many animals; we see it so, or nearly so, in the embryo of certain animals; and lastly, its traces, even in the adult human frame, are occasionally indisputable.

* I presume that it is not necessary to remind the reader that when Malpighi asks if these tubes may not be "vasa deferentia," he uses simply the expression, employed by all the anatomists of his day, to designate the vessels conveying the female seminal fluids from the ovarium, which he always called testis muliebris, and the vessels conveying the fluids from it the vas deferens.

Malpighi's notions about the nature of these ducts may be gathered from the following quotation:—"An nero (Jacobo Spon. par Cellus Malpighius, S. S. P. p. 34) uterina vesa superius exposita huic fœcunditati aliquid conferas debitari potest. Et primo probabile est, contentum succum fœminei seminis vel saltem pros statarum ichoris loco esse, et inde inciternentum, et propriam energiam, und cum masculino semine ovo communicare posse. Quoniam tamen hæc vesa per longum uteri producantur et extremis finibus ejusdem cornua irrigunt glutinoso, pariter succo turgent, graviditatis præcipue tempore; ideo mihi dubitandum," &c.

Part IV.

On the laws of hermaphroditism, and on the type of the generative organs in animals.

The discovery of the persistence of the vasa deferentia, and occasionally of a portion of the vesiculæ seminales, in the adult females of certain ruminating and pachydermatous animals, recalled to my mind all that I had seen and read of organs whose exact nature and probable functions had never been accounted for on rational principles; and I returned to the subject with the hopes of solving certain physiological problems of avowedly great difficulty. It then seemed to me evident that organs exist in the males of various animals, which by their structure and nature are essentially female, and *vice versâ;* and this fact, for assuredly it is one, naturally led to the inquiry, why they should exist at all? I need not, I think, remind this learned society that a problem of this kind may be solved in a variety of ways. First, it may be said that, as the male and female of any species of animals are obviously formed upon one plan, so we need not be surprised that the rudiments or remains of male organs are occasionally found in females, and *vice versâ*; secondly, that they may be present from analogy, nature "delighting in analogies;" thirdly, when excessive or unnatural, their presence may be owing to a *lusus naturæ;* lastly, we may cut short all inquiry by an appeal to final causes.

With the view to determine these questions in a somewhat different manner, I shall endeavour, in the second part of my memoir, to bring

in review the more striking deviations from what we term the regular structure, confining my inquiries chiefly to the structure of the generative organs, applying to them the various theories which have been proposed for their explanation.

From the very earliest of recorded times there have appeared, from time to time, beings of an equivocal nature as to sex, appertaining to the species of animals naturally disunited by the sexual distinctions of male and female. The ancients, when they found both kinds of organs regularly occurring in the same individual, in any of the lower animals, unhesitatingly pronounced the being hermaphrodite; but if this accidentally took place in an animal high in the scale, the appearance bore the character of a prodigy. If it happened in the human race, it indicated the approach of terrible events. Almost all the older writers detail unexampled cruelties which were inflicted on such unfortunate beings as came within the grasp of ignorance and superstition. It is true that the scientific, even of those terrible times, raised, as became them, their feeble cry against these outrages on humanity and common sense, but most frequently without success. The grounds on which they proceeded were, indeed, generally erroneous; and hence, perhaps, the reason why little attention was paid to their dicta: they either called the beings to which we now allude *lusus naturæ*, which, of course, with every rational person, not medical, was a phrase so unintelligible and absurd, that they very naturally paid to it, and to the opinions of those medical men who employed it, no attention whatever; or they denied that there existed such beings as hermaphrodites in any of the higher animals, and to make good their assertion, every thing like logical reasoning was set aside. As a specimen of how far a wilful misrepresentation of obvious facts may mislead a person, and of the kind of reasoning employed by physiologists even to a period so late as 1750, I shall quote a passage from a respectable continental author.

"We may then still, resting our opinions on the case of Michael Anne Drouart, and on a number of others, believe that there will never be true hermaphrodites. Although nature makes exceptions to her laws (s'ecarte de ses lois), she still maintains a certain regularity in her works, and perhaps has even in view, in her caprice, to conceal from us, under a '*bizarrerie industrieuse*,' which occupies us entirely; but we shall never see both sexes in the same person: the temperament of the one and of the other sex is too different to allow of their being found together in the same individual, and there is no example of there being found, in the same persons, the genital organs of both sexes, perfect as to number and conformation; and even when such a case shall occur, it would be an absurdity to suppose qu'il peut en même temps concevoir et engendre," &c.

It were easy to shew, even from the treatise itself on hermaphrodites by Dr. Parsons, that the assertion that no such appearances as hermaphroditical existed, is without foundation in truth; but we need not, at the present moment, dwell on these points, which some may fancy to have been refuted long ago; and yet these opinions of Dr. Parsons are supported by the very learned Portal, in his Anatomie Médicale, and who assuredly is an anatomist of high reputation. There is a single remark I may make regarding the definition of hermaphroditism: if it be required to show the existence of what may be called efficient hermaphroditism, in man or in any of the mammalia, this may be found difficult; but if, to constitute this state, it be sufficient to prove the existence of male and female organs in the same individual, and these organs more or less perfect, then this proof is already before the public. Neither will it, I presume, be at all necessary to consider the doctrine of the congenital union of germs, a doctrine which any one at all acquainted with anatomy will readily perceive is in no shape connected with hermaphroditic structure.

When we examine the structure of the human generative organs, we perceive that there are male organs in the female body, and female organs in the male. So long as these do not exceed a certain standard, the appearances are termed natural, and the question as to the reason for their presence does not force itself on the mind. In some animals, such as the ruminants and

the pig, additional organs are observed to be almost constantly present; and this, though a remarkable fact in itself, and worthy of the most extended inquiry and the deepest consideration, comes at last to be neglected by most observers.

When additional parts appear, and the nature of the organs becomes equivocal — when male and female organs are found in the same individual, imperfect perhaps in their function, but effectual in modifying and altering the whole economy of the being—the appearances are then deemed worthy of notice; they are termed hermaphroditical. So long as these appearances are on a small scale, they do not affect the general economy of the being, nor do they attract notice; but whenever, by a law of nature which I shall endeavour to explain during the present memoir, these supernumerary or additional parts acquire an augmentation of bulk, they affect the whole economy. Mr. Hunter, who investigated everything with so rare a talent and success, has left us an admirable memoir on the free-martin, that is, the hermaphroditic ox. He was not aware that a slight approach to hermaphroditism almost always exists in black cattle or the pig; the dissections proposed by him are merely more advanced stages of the hermaphrodism of which I speak. The specimen which he received from Mr. Wright is less perfect than that I submitted to the Society at last meeting; and therefore I have represented it second in the diagram, immediately following the drawing of the parts in what may be termed a natural state. The third figure on the board presents us with a remarkable instance of Mr. Hunter's sagacity and acute anatomical observation: he has named the interrupted portion of the tubes of Malpighi (I. l.) *portion of the vasa deferentia*, although there were no testes present in the case he examined: the vesiculæ seminales, however, are present, together with the uterus, and he was aware that the animal, although it more resembled, in external appearance, the cow than the bull, was yet equivocal. In the fourth figure we have the remains of all the internal organs of generation, being almost a complete mixture of the male and female. The external appearances and general character corresponded, it being neither that of the bull nor cow, but of a mixed character. A still more complete approach to hermaphroditism has been recorded by Mr. Homes, in an early number of the Medical and Physical Journal. In this case all the male organs were complete, and, in addition, the vagina, uterus, and fallopian tubes, with rudiments of the ovaria.

It may be supposed by some, that hermaphroditical appearances, such as those I have spoken of, are limited to animals which are usually considered as lower in the scale of animal creation; but this of course is a great error. Mr. Lee has related a case of a human being, in whom a testis was found on one side of the body, and an ovarium on the other. Maria Nowra appears to me to have been completely hermaphroditical.

[To be continued.]

SOME REMARKS ON THE CLIMATE OF MADEIRA AND THE AZORES.

By James B. Thompson, M.D.

(For the Medical Gazette.)

The invalids, after their arrival at Madeira (which generally varies from eight to ten days from leaving England by sailing vessels, but sooner if by steam boats), are never so well as while the wind the "Leste" continues. This wind appears to affect the older residents more than casual visitors. It is attended with a peculiarly clear and cloudless sky, and the atmosphere is most agreeable, communicating a buoyancy and vivacity of spirits experienced but occasionally in tropical climates; the weather during its continuance being most delightful; the sky of a deep blue so stainless that one might fancy it had never been sullied by a cloud; with a transparency in the atmosphere which, like the effect of moisture, seems to bring out fresh hues from every object. The nights, too, are delicious, soft, and balmy; and in moonlight nights you may suppose yourself walking in summer and midday brightness: the orange trees in flower, and the air surcharged with the most agreeable fragrant perfumes. With the departure of the "Leste" rain almost invariably follows; and now

what you may call the sickly or least agreeable part of a Madeira climate is experienced.

The superiority of the climate of Madeira consists in the uniformity of its temperature. It differs, perhaps—in summer and in winter—less than in any known place north of the tropic. The thermometer commonly ranges from 60° to 75°; and in the greatest extremes seldom sinks or rises more than five degrees below or above that medium. (For further particulars on this subject see the Report on the Climate of British Colonies, in the London Medical Gazette, Aug. 25, 1843.)

The climate of the group of islands called the Azores is very agreeable, and probably more suited to some constitutions than that of Madeira. The geographical position and general geological characters of the Island of St. Michael's renders it peculiarly eligible for patients labouring under tubercular complaints in an incipient form; for at any remoter stage, I look upon it as worse than cruel to recommend patients to leave their friends, when there can be no prospect of restoring permanent health; and you sever them from those fond ties and associations, at a period when, of all others, they require the soothing and condoling influence of friends and relatives.

St. Michael's appears to have been originally a plain, covered with very beautiful trees, rich verdure, and aromatic plants; at the present time, however, it consists of a number of mountains, hills, and declivities, none of which are primitive, but evidently the production of volcanic eruptions. The mountains and hills clearly indicate this, by their conical figure, and the reservoirs on their summits (craters), from which, it would appear, the volcanic discharges emanated. These islands bear evident marks of being the production of fire, as may be quite obvious to any visitor, from the unequivocal signs of the effects of that destructive agent, in an accumulation of lava, scoria, and volcanic sand. The same applies to the islands in the South Pacific Ocean—New Zealand, the Chatham Islands, &c. &c. The oranges grown at St. Michael's, as all the world knows, are highly prized for their superiority.

In any remarks on climate, it is desirable to give the most accurate data as to the size and position of the places referred to. This group lies between 37° and 40° of north latitude, and 25° and 32° of west longitude. The islands are nine in number, and enjoy a very clear sky and salubrious air. They are extremely fertile in corn, wine, and a variety of fruits. The inhabitants breed a large quantity of cattle. The wine called *Fayal* is chiefly raised on the Island of Pico, which lies opposite to Fayal, and is the largest of all the Azores. These islands have greatly suffered by earthquakes. They were first discovered by Martin Behaim, and got their name from the number of *hawks* observed on them.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

The Physiology of Inflammation, and the Healing Process. By Benjamin Travers, F.R.S. &c. London: 1844. 8vo. pp. 226.

Mr. Travers has endeavoured in this treatise to steer a middle course between orthodox Hunterians, and the mere slaves of the microscope; and to "extend our acquaintance with the phenomena of inflammation, as far as the present state of science permits, by the joint aid of physiological and pathological observation, each deriving force from the other."—Preface, p. vi.

He has divided his work into twelve chapters, besides an introduction; their subjects are as follows:—Preliminaries: direct effects of stimuli and of wound; local symptoms of inflammation; constitutional symptoms, or effects of inflammation on the system; the processes of inflammation. Effusion; adhesion; periodical phenomena of wounds, illustrating the progressive stages of the healing process. Dried specimens: granulations and pus; suppurative inflammation; periodical phenomena of wounds, illustrating the progressive stages of the healing process. Recent appearances; ulcerative inflammation; cicatrization; gangrenous inflammation, and gangrene.

The following extracts will give a favourable notion of our author's topics, as well as of the manner in which he handles them:—

"1. The occasional causes of inflam-

mation are many and various, chemical, mechanical, and vital; the immediate cause is one and uniform. Cold and heat, wounds, foreign bodies, stricture, and poisons, are chief among the former; the latter is an interruption to the proper circulation and uses of the blood in the part affected. Spontaneous inflammation, a term in common use, is a solecism in language. Inflammation is always a forced state, however temporary and susceptible of resolution.

"2. The interruption above mentioned varies in degree as inflammation varies, and its signs or symptoms are demonstrated accordingly.

"3. The actions or processes of inflammation are several and well marked, and bear reciprocal relations to each other, influenced by the character of the inflammation; under which term I include its origin, intensity, extent, duration.

"4. The tendency of inflammation to preserve or destroy is not to be confounded with, much less employed to designate, its pathological character and denomination; because all its actions are capable of serving, and actually do serve, both salutary and destructive purposes, determined by the existing circumstances of the part or the system, as time, place, order, need, degree. Thus adhesion is often destructive, and gangrene conservative; and the same may be said of suppuration and ulceration." (P. 24.)

And a little farther on:

"7. Inflammation is not the less inflammation because the development of one, or even all its signs, is so feebly and obscurely manifested as to render its presence questionable to inexperienced observers, or because of its occasional tendency to yield in a remarkable manner to the operation of stimulants, even in its commencement. An eminent writer* has assumed that inflammation is not favourable, but adverse to healing; that it interrupts or retards the process of restoration when its presence is indicated: that therefore all our efforts should be directed to prevent inflammation coming upon wounds and injuries. If the epithet 'undue' or 'unnecessary' be prefixed, there is no difference between us. From the slightness of many injuries, and the concurrence of good habit of body, the exaltation of sensibility and of heat, the increase of fulness and of colour, are imperceptible, and it is to continue this happy state of imperception, and to prevent their becoming palpable, that rest, position, and cooling applications and medicines, are enjoined; in other words, it is to preserve the subdued state of inflammation, which favours healing, and not to supersede it, which would more effectually retard or preclude healing, than the aggravation caused by an improper treatment." (P. 28.)

"Pain, like all modifications of perceptive sensation, has its source in the brain, although it is referred to as if it were seated in or emanating from the inflamed part. This is only partially demonstrated by the experiment of intercepting the nervous communication; because, while the circulation continues, the proper nerves of the blood-vessels escape division. But in a complete arrest of sensation and voluntary motion, as from a certain amount of injury to the brain or spinal chord, the circulation continues, and the sensation of parts so situated is equally deficient when undergoing inflammation, as in others not so affected.

"The following curious observation offers no exception:—A gentleman, whose spine was broken low down by a fall in hunting, and who was utterly deprived of sensation and motion of the lower limbs, had sloughing of the right hip, exposing the glutæi and trochanter, the surrounding integument hollow and bagging, *i. e.* no adhesion, and an unhealthy pus in abundance. On this hip he had been constrained to lie, and lay without pain; but on the other (left) hip, though repeatedly attempting it, he could not lie without severe pain; though inflamed on the point, it had not gangrened. Being equally insensible on both hips, he was at a loss to comprehend how this difference could be explained. The displacement of the fracture was on the left side, and the effect of pressure on that hip was to irritate the left lumbar plexus at the joint site of its division and emanation from the chord. Thus pain is referred to parts utterly devoid of sensation." (Pp. 41-2.)

The following observations will be familiar to the judicious practitioner, but they can hardly be repeated too often.

* The late Dr. Macartney, of Trinity College, Dublin.

"There are two false doctrines concerning blood-letting for inflammation, which cannot be too strongly condemned; the first, anticipatory blood-letting, by which I mean, the large and repeated detraction of blood before inflammatiou, being considered inevitable, has actually manifested itself—on the hypothesis of starving the action, and thus rendering it tractable—which is a direct attack on the vitality, and fatally perverts the action, if it do not destroy the resisting powers of the system. The second, continuing the employment of the lancet so long as the last drawn blood exhibits the signs of inflammation, which if drained to the last drop it would do; or, in other words, not reflecting that there is a line beyond which the practice becomes destructive instead of remedial; and that there are many inflammations which do not admit of arrest by depletion, and upon which other modes of treatment are efficient for this end, even though not an ounce of blood be drawn. Many lives have been sacrificed to the prevalence of these irrational and absurd notions, and many preserved in their extremity by being fortunately placed beyond the reach of the surgeon; especially, I am inducedto believe, in military practice." (Pp. 58-9.)

The College of Surgeons possesses a series of preparations made by the late Dr. Todd, of Brighton, illustrating the healing process after wounds in the web of the frog's foot, in their daily progress to complete recovery.

As the preparations are unaccompanied by any description, Mr. Travers thought it necessary to repeat these experiments, in which he was assisted by Mr. John Quekett, one of the students of the College of Surgeons.

We regret that Mr. Travers should lend the sanction of his high name to experiments, by which much is inflicted on animals, and little, if any thing, is gained to man; yet compared with the proceedings of ordinary vivisectors, the mere laceration or burning of a frog's foot may appear commendable.

Here are two examples of the appearances; the figures represent the number of days after the operation.

"*Lacerated and contused wound by a sharp blow with a blunt body.*

2. Clots of extravasation or ecchymosis on angles and borders of wound; no surrounding circulation.

4. Idem. Appearance of stagnant blood distending a large vessel passing nearly round the lacerated edge.

7. Wound has a more defined smoothed edge; slow circulation commencing in its vicinity.

11. Much exudation and congestion in the neighbourhood, and highly injected capillaries; but no trace of circulation.

Actual cautery, or heated iron.

2. Discoloration, opacity, and stagnation, of surrounding blood-vessels, which are gorged.

4. Blood still stagnant; margin of burn somewhat less opaque.

7. No circulation, but distinct demarcation of injury by a lightly-coloured margin.

11. Found dead." (P. 131.)

Mr. Travers' work is a summary, and more than a summary, of the present doctrine of inflammation, and will find a place in every complete medical library.

Essay on the Physiognomy of Serpents. By H. Schlegel, Doctor in Philosophy, &c. Translated by Thomas Stewart Traill, M.D. F.R.S.E. &c. Edinburgh: 1843.

A curious and interesting work. It contains a complete history of serpents, their anatomy, physiology, geographical distribution, &c. &c., with portraits in which it is interesting to trace the varieties of form and expression which the head displays; indicative (when once the key has been given) of the disposition and properties of the animal.

"In examining a series of living animals, the attentive observer will remark, that, in their features, in their looks, and even in their forms, he may trace the expression of certain dispositions, habits, and passions, which are still more directly than in man the result of organization. On reiterating his observations, he will not fail to recognise by their features the different species of animals; he will seize the relations which link the species to each other; he will bring them together, and in this synthetic process he will arrive at a natural method. A series of beings thus grouped will produce an impression of the whole similar to what he would receive from a single individual,—an impression which it is necessary to depict as a whole, to

obtain a knowledge of its principal features.

"This manner of examining nature is, indeed, diametrically opposed to that which sets out to distinguish individuals from isolated characters; but, as it offers the only means of tracing a faithful picture, as it sets free the intellect chained in the narow bounds of artificial methods, we should early fix the attention of the young naturalist on the universality of these views, and accustom him to seize, at a single glance, all the features which, by their union, form the peculiar character of each individual."

To the anatomist this little volume cannot fail to be interesting; but it is scarcely suited to the general reader, or medical practitioner who seeks chiefly for practical information.

A Practical Chart of Diseases of the Skin. By GEORGE ALFRED WALKER, Surgeon.

THIS is a large, neatly executed chart, fitted, and, we presume, intended to be hung up in the surgery or study of the practitioner. It contains a graphic description of the principal diseases which affect the skin, whether usually coming under the denomination of cutaneous diseases, or not (such as measles, scarlatina, &c.) It gives the same kind of information, in a condensed form, which we find in Willan, Bateman, and similar works. The principal recommendation which it possesses is, that if framed and hung up it will be more easily referred to. Nothing of the kind can be more neatly executed.

The Warm Water Remedy.—A Treatise on the Warm, Vapour, and Medicated Baths, with Directions for their Use. By HENRY WEEKES, M.R.C.S.L. &c. London: 1844.

THIS is a mere brochure, containing very little either of novelty or interest. The author strongly urges the more general use of the bath in this country, and we agree with him that its more extensive adoption would be very desirable. The portion of the pamphlet which contains most of interest is that which relates to the "medicated bath," and from this we give an extract containing the most important points.

"Medicated baths may be classed according to their effects on the system, as stimulating, anodyne, absorbent, &c.; or they may be divided in a more practical manner into those which can or cannot be respired.

1stly. Those which *can* be respired:—

The Conium bath.
The Opiate bath.
The Nitric Æther bath.
The Chlorine and Iodine baths, much diluted.

2dly. Those which *cannot* be respired:

The strong Chlorine and Iodine baths.
The Sulphur bath.
The Mercurial baths.
The Nitro-Muriatic bath.

"This latter division including the non-respirable baths, does not, correctly speaking, come within the scope of this treatise; as these agents are not at all administered with the vapour of water. Still they are intimately connected with the foregoing ones, in being *external remedies*. They are principally used in diseases of the skin, and their success over other remedies in these obstinate affections has been very great.

"The exact strength of the bath to be employed will entirely depend on the nature of the disease, and on the age and constitntion of the patient; for such is the idiosyncrasy of some persons, that the proportions of the medical ingredients can only be determined on by individual experience.

"The Conium and Opiate baths are indicated in various painful *nervous* affections, being eminently serviceable in lumbago, sciatica, and tic-doloreux. Their anodyne qualities also render the simple vapour bath better adapted for the relief of gout, and those painful swellings of the joints which often result from acute and chronic rheumatism. When about to be used, the ingredients should be infused for some hours previously to their ebullition.

"The Nitric Æther bath, being a combination of the vapour of Nitric Æther with that of water, speedily produces, from its stimulating effects, great capillary excitement and profuse perspiration. It will, therefore, be found serviceable where the latter is an important object; and should we be ever again subjected to the dreadful visitation of the cholera, this bath would certainly be deserving of trial in that epidemic.

"Chlorine gas, considerably diluted, has been respired in pulmonary consumption with the most beneficial results; and in the *early* stages of the complaint, some well-authenticated cures have been effected. By surrounding the whole body with an atmosphere of this gas diffused in the vapour of water, the respiration of the patient is easy and natural, which is not the case in the way in which this remedy is at present generally administered.

"The Iodine vapour bath furnishes us with a mode of treating scrofulous affections in a simple and most satisfactory manner. Here the external and internal administration of Iodine can simultaneously be afforded the most delicate invalid. Cases of chronic scrofulous inflammation of the eyes have been cured with this bath after the failure of all the usual remedies. In scrofulous tumors and ulcerations, as well as in some skin diseases, a *strong* Iodine vapour bath (unfit for respiration) has been found successful.

"I have inserted the Nitro-Muriatic bath of Dr. Scott, which was some years since introduced by that gentleman as a remedy for various kinds of liver complaints, and was stated to have been very efficacious both in India and England. As the medical agent is chlorine gas, evolved in the bath by the union of the two acids, this inconvenient process can now be avoided by adopting the use of the vapour chlorine bath."

MEDICAL GAZETTE.

Friday, January 5, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

NEW CHARTER OF THE COLLEGE OF SURGEONS.

THE most remarkable feature of this charter is undoubtedly the institution of a privileged class, under the title of Fellows. On this we offered some comments in our last number. We noticed also some of the changes effected in the composition of the Council, or governing body. We stated that this body was henceforth to consist of 24, instead of 21 members as at present; and we intimated our intention to explain, in an early number, the mode by which the charter directs that all future vacancies in the Council should be filled up. We proceed to redeem our promise.

The first circumstance that strikes us as particularly worthy of notice in this respect, is that clause of the charter (12) which directs that in all cases, Fellows going out of office shall, notwithstanding, be eligible for nomination and *immediate re-election*, provided they continue in all other respects eligible. We do not see any objection to this clause, which enables the Council to profit by the matured experience of its oldest members; but it should be remembered, that the principle, if not kept in check, as it doubtless will be, by the watchful care of the electors, would, *per se*, lead to the very evils which the present system has been accused of engendering. All Fellows (including, of course, those who are already on the Council), are to have the privilege of voting at elections of members of the Council. No proxies are admissible. The election is to be by ballot, and to take place on the first Thursday in July in every year. Fifteen Fellows must be present before the ceremony of balloting can begin. So far so well. All this is plain enough, and all highly proper; but now we come to a series of measures, prerequisites to the election of members of Council, which we shall not probably succeed in rendering equally intelligible, or equally satisfactory, to our readers.

The nineteenth clause of the charter directs that no Fellow can be put forward as a candidate for election into the Council, unless there shall be produced at or about the same time (it not being specified which), a written certi-

ficate, signed by as many Fellows as the Council shall from time to time think fit to require, stating that he, the said candidate, is a fit and proper person for holding such office; that he does not, and has not for the five preceding years, practised midwifery or pharmacy, and that he resides, and *bonâ fide* practises, within five miles of St. Martin's-le-Grand. This certificate being duly handed up, in such way, manner, and form, as to the said Council shall seem good, then the said certificated Fellow may proceed to the ballot.

Again, if any *eligible* Fellow, that is, any Fellow resident within the prescribed limits, and not practising midwifery or pharmacy, either then or for five years preceding—if such a one has been passed by for want of such nomination, he shall cease for ever afterwards to be eligible, except upon special terms of nomination, to be arranged by the Council at their pleasure. So, in like manner, if any eligible Fellow, duly nominated as aforesaid, shall have stood the ballot, and not been successful, he cannot henceforth be brought forward as a candidate, except under the special terms of nomination applicable to the unhappy Fellow who cannot find friends to certify his fitness in that particular year. And what is more, if either the unnominated, or the unsuccessful candidate, should meet with the same bad luck a second time, "he shall ever thereafter cease to be eligible for election upon the Council."

For the purpose of insuring the due fulfilment of these provisions, it is ordered (clause 17), that the name of every Fellow eligible in accordance with the aforesaid restrictions, "shall be announced to the meeting in the order, and according to the priority, in which his name shall stand in the Fellows' Registration Book." The obvious intent of these restrictions on the freedom of election, is to limit the number of candidates within reasonable bounds; and we clearly see the propriety of some laws to restrain the putting forward uselessly and wantonly a variety of candidates.

The new plan is intended to supersede that simple but not very liberal contrivance, generally known by the name of a *house-list*. Such a system is very properly discountenanced by the new charter; but we cannot, as at present advised, bring ourselves to think that the machinery brought forward as a substitute is likely to be popular. We can hardly persuade ourselves that it is very practicable. No provision is made as yet for obtaining the previous consent of the candidates to their nomination, though, of course, in the plenitude of their power, the Council may make such consent imperative. As the clause stands, it almost compels the Fellows to select one of the senior members of the body, for otherwise they themselves, like the candidates at the Blind Asylum, become superannuated.

Nothing is more natural than that the Fellows should desire to see their Council reinforced by a proportionate number of young hands. This has long been a desideratum in the Council, and it is, beyond all doubt, what is best for the public and the profession. But how this desirable consummation is to be brought about, except by superannuating a large body of Fellows, we cannot, as the charter stands, perceive. Supposing that a body of Fellows should agree among themselves to put forward at the elections in 1844 and 1845, six young members, by way of counterpoise to the 21 seniors now on the list, the result would inevitably be, that nearly every other existing eligible Fellow would be superannuated on the 5th July, 1845; that is, in a year and a half after the issue of the charter.

Surely an arrangement which even

admits of such a result as this (extreme though the case may be), cannot be a good one. It limits the choice of the Fellows in an indirect way, and in a way calculated to give pain. It savours too much of the old method of electing the Council, and might certainly be improved, with great advantage to the working of the charter. The simplest way of meeting the acknowledged difficulty, would have been to require that the certificate of nomination should be signed by so large a number of Fellows as almost to render his success a moral certainty. To insure a due admixture of seniors and juniors in the Council, it would have been easy to direct that, in alternate years, candidates for the Council should be selected from the senior or junior moiety of the list. Either of these measures would have saved the necessity of that harsh measure, the superannuation of members for defect either of nomination or of success. We will not dwell longer on this topic. If a revised charter should ever be issued, we doubt not but that it will come in for its fair share of consideration.

3. The construction of the examining body next claims our attention. Various alterations have been effected here, both with reference to the mode of electing examiners, their admissibility, and the period of their continuance in office. The number of examiners remains the same as at present, viz. ten; but the charter provides that, after the demise or resignation of the present examiners (who hold their offices for life), all future examiners shall be elected by the Council of the College, either from among themselves, or the general body of the Fellows. It is further stipulated, that they shall hold office during the "pleasure of the Council, and so long only as the Council of the College shall think fit." This is undoubtedly a great improvement upon the old system, coupled as it is with the abolition of that antique regulation, which provided that the two Serjeant-Surgeons to her Majesty, and the Surgeon-General of her Majesty's Forces (whether competent or incompetent to the situation), should have a preference of admission as examiners before all other persons.

Hitherto it has been the law that the President and Vice-Presidents of the Royal College of Surgeons should be chosen exclusively from out of the ten Examiners. The new charter directs that in future those offices may be filled by any of the 24 members of Council. This is another most obvious improvement. In fact, in this part of the charter we find everything to praise, and nothing even to animadvert upon.

A few other points connected with the new charter of the College of Surgeons seem to require some brief notice from us. It will have been seen that the Council were directed to create from 250 to 300 Fellows in the first three months. It is provided, however, in clause 4, that this is not the maximum number of the Fellows. No maximum, indeed, is prescribed. The Council are empowered, during the ensuing nine months, to create as many additional Fellows (without any fee) as they shall think fit. How far they will be disposed to carry this privilege remains to be seen; but probably they will think it right so to restrict the number, that the Fellowship shall be in effect what it was obviously intended to be—A TITLE OF HONOUR.

The Council have the sole power of conferring the Fellowship, and there are no means provided for appealing against their decision, and no check upon any of their measures, except the following, which, so far as it goes, is excellent, and deserving of every commendation. The penultimate clause of the charter declares, that no bye-law or ordinance

hereafter to be made by the Council shall be of any force, until her Majesty's approval thereof shall have been signified by the Secretary of State for the Home Department. This virtually gives the profession an appeal to the Home Secretary against the decision of the Council—that is, provided the nature of the proposed bye-law or ordinance shall, by any accident, have oozed out.

The charter continues to the College and Council all those powers, authorities, and discretions, and all that same jurisdiction, with respect to the election and choice of officers, the admission and expulsion of Fellows and Members, and the regulation of matters pertaining to the government and advantage of the College, as have heretofore been enjoyed, save and except in those respects for which the act specifically provides.

We have, lastly, to offer a few observations to our readers on the manner in which the Council have exercised that first privilege which the charter confers upon them, namely, the selection of the original three hundred Fellows. The list appeared in a late number of the journal, and doubtless attracted the notice of our readers. The grounds on which the Council proceeded in their choice appear to have been the following. They began by giving the fellowship to every surgeon, and every assistant-surgeon, of every recognised hospital in England, without exception. Then they took every lecturer on anatomy and surgery, and every demonstrator at each of the schools attached to those hospitals, whether metropolitan or provincial. They then applied to Sir James M'Grigor, and, on his recommendation, promoted certain distinguished navy-surgeons. Sir William Burnett furnished his quota of deserving navy-surgeons. The Chairman of the East India Company sent in his list of "honourable men," and these were forthwith added to the catalogue of Fellows. The Council then exercised their own privilege, and chose a certain number of gentlemen, chiefly surgeons practising in London, who had distinguished themselves in various ways. Mr. Bacot, for instance, was selected, as an Examiner of the Metropolitan University, and the Inspector of Anatomy. In several instances, the surgeons of dispensaries have been nominated. Mr. Ceely, of Aylesbury, was selected, most deservedly, for his labours in pathology; Mr. Blagden, and Mr. Stone, for their acknowledged eminence as accoucheurs. The list contains not more than one or two names of gentlemen acting as general practitioners. We have every reason to believe, however, that this arose, not from any unwillingness on the part of the Council to acknowledge the professional, scientific, or general merits of many of that class, but because the charter restricted their choice to 300, and the several classes now enumerated absorbed the whole number.

The Council appear to us to have fulfilled this part of their arduous duty with excellent taste and good feeling. Though we cannot reasonably expect that all will be pleased, yet we think the profession generally will acknowledge the judgment and impartiality which have been evinced in the selection of the first batch of Fellows. It is particularly gratifying to us to observe the civil and military classes of the surgical profession united in the ranks of honourable association; and the Council, in the discharge of their new functions, have in no circumstance earned a nobler title to our praise than in according, even with perhaps too liberal a hand, the honours of the fellowship to the absent but not forgotten members of their body.

FELLOWSHIP OF THE COLLEGE OF SURGEONS.

To the Editor of the Medical Gazette.

Sir,

In the leading article of your journal of this date, you have coupled my name with a supposed examination of a member of the College, of 50 years of age, for the Fellowship; and as gentlemen not living in London may presume you have selected, or taken it accidentally, from my supposed affection for the new charter, I shall be obliged by your permitting me to make known to them my sentiments on this particular point of the Fellowship, viz.:

"That no person should become a Fellow or Elector (which is the sole office or duty of a Fellow) until after he had been at least seven years a member of the College, when he should be at liberty to become a Fellow on paying the prescribed fee; or by undergoing a special examination without paying the fee, if found deserving of such honorary distinction."

At Oxford and Cambridge, a man takes his degree of B.A. after a sufficient and approved examination, and becomes M.A. after a further prescribed study without examination; and qualifies himself as an Elector by paying the sum of thirty guineas, a precedent which might have been followed, I am of opinion, to the satisfaction of a very great majority of the profession.

I am, sir,
Your obedient servant,
G. J. Guthrie.

4, Berkeley Street, Dec. 30, 1843.

ON THE CORPUS LUTEUM.

By T. Wharton Jones, Esq.

[The following is the best account of the corpus luteum which has fallen under our notice.]

Sect 75. Baer's opinion, that the corpus luteum consists in a growth inwards of the inner layer of the Graafian follicle, is supported by Bischoff, in opposition to opinions entertained in this country, viz.—that the yellow substance is contained between the two layers of the walls of the Graafian follicle according to Dr. Montgomery, or that it is outside both according to Dr. Lee. Barry's statements appear to favour Montgomery's view, though, in reality, he agrees essentially with Baer, and that apparently without knowing it. Barry considers his "*ovisac*" as the inner layer of the Graafian follicle; now Baer, in speaking of the inner layer of the Graafian follicle undergoing the change to form a corpus luteum, could not have referred to Dr. Barry's "*ovisac*," inasmuch as he did not know of the existence of such a structure, but to the inner layer of the cellulo-vascular wall of the Graafian follicle—the *covering of the ovisac* of Barry. All this, indeed, Barry is aware of; but, in sect. 157 of his second series, unnecessarily regrets to find himself expressing an opinion at variance with that of Baer, and in his subjoined note coincides with Montgomery in his view of the corpus luteum, but inaccurately, according to his own principles, inasmuch as Montgomery speaks of the layers of the Graafian follicle in the same sense as Baer.

Sect. 76. The fact is, Dr. Barry's "*ovisac*," or as Bischoff calls it, *tunica propria** of the Graafian follicle, exists only at the commencement of development, and is not to be found afterwards. "From my observations on the formation of the Graafian follicles," says Bischoff, p. 45, "I have, indeed, admitted a *tunica propria*, which becomes overlaid externally by a layer of fibres, and with this represents the follicle. But I have never found that this *tunica propria* admits of being separated as a distinct layer of the follicle, but have found reason for admitting it only in the process of development." Barry says (2nd series, p. 317, sect. 154), that in a few hours after the ovum has been discharged from the Graafian follicle, the "*ovisac*" may be readily removed by pressure from the burst Graafian follicle; but in sect. 155 he says, that at the end of several days the primitive ovisac is no longer met with in the ovary; and in a note he remarks, that he does not know whether in the interim the ovisac has been absorbed *in situ* or first expelled, but in the hog he has found what seemed the remains of ovisacs in the infundibulum. In reference to these statements Bischoff observes, that he has never seen that any *tunica propria* becomes loose from the rest of the follicle after the expulsion of the ovum. The gelatinous-like mass found in the follicle in the first period, after the escape of the ovum, he asserts, is by no means the *tunica propria* of the follicle of the *ovisac*, as it has been seen Barry thinks, but the fluid of the follicle and membrana granulosa which had not all escaped, changed and become more con-

* The terms *ovisac* and *tunica propria* are employed in the descriptive and illustrated catalogue of the museum of the Royal College of Surgeons, vol. v. in a different sense from that in the text. *Ovisac* is used for the whole Graafian vesicle or follicle; *tunica propria* is applied to the cellular and vascular wall of the Graafian vesicle, or Barry's "covering of the ovisac;" whilst *ovarian vesicle* is used for what is referred to in the text under the names of *ovisac* of Barry, or *tunica propria* of Bischoff.

sistent, and which by great development of its cells has been converted into a viscid coherent mass." Barry's own figure 98, plate 5, is corroborative of this assertion of Bischoff.

Sect. 77. To return to Montgomery and Lee. The cases adduced by these gentlemen unequivocally show, that human true *corpora lutea*, at least, are not growths of the inner layer of the Graafian follicle—the inner layer in the sense of Baer, and not of Barry—for in such *corpora lutea* not long after conception the inner layer is found but little changed, and not at all the seat of the yellow growth.

Sect. 78. The yellow substance, it is to be observed, is a new formation, and not a *conversion* of the cellular tissue of any part of the wall of the Graafian follicle, as appears to be the opinion of Baer, Barry, Bischoff, and the author of the notices in the Catalogue of the Museum of the College of Surgeons. The designation of the corpus luteum by the latter, as the "thickened parenchymatoid proper tissue, or tunic of the *ovisac*," must be held to be erroneous. From the statements in the catalogue regarding the corpus lutea in the College of Surgeons' Museum, it cannot but be admitted that the preparations support the views of Montgomery and Lee, so far as these two gentlemen concur, rather than those actually given in the Catalogue.

Sect. 79. As above stated, Montgomery is of opinion that the yellow substance is deposited between the two layers into which the cellulo-vascular wall of the Graafian follicle may be separated by dissection, whilst Lee maintains that the yellow substance is wholly outside both, and that any appearance of membrane between the yellow substance and the stroma of the ovary, which may in some cases present itself, is due simply to condensation of the neighbouring part of that stroma. From the examination he made of the very recent corpus luteum described by Dr. Lee, in the Medico-Chirurgical Transactions, a few years ago, the author of this report was led to concur entirely in this view; and it may be observed that the statements in the description of the corpora lutea, in the Catalogue of the College of Surgeons, are unequivocally to the same effect.

CASE OF A

NEEDLE ENTERING THE RIGHT BREAST,

AND FINALLY LODGING IN THE HEART, CAUSING DEATH,

By B. F. Leaming, M.D.
Physician to the Philadelphia Dispensary.

On the 4th of August, 1842, a sempstress, in good health, eighteen years of age, came to my office, requesting me to remove a needle which she supposed had penetrated the right breast. Two days before, while in the act of bending suddenly forwards, she had struck a table, and driven a needle, which was sticking in her dress, forcibly into the breast. She was not quite certain that the needle was still there; sometimes she thought she could feel it, at other times she was sure it was not there. On examination I found a puncture about an inch from the nipple, a little below the margin of the areola, and on the side towards the sternum. Her breast was rather large; it could be pressed firmly in any direction without causing pain; she had no cough, and could take full inspirations without inconvenience.

On the 8th of September she had pleurisy of the right side; she had not been exposed to cold, but the pain and cough, and difficulty of breathing, had come on suddenly after she had stooped to pick something from the floor. The inflammation yielded to the usual antiphlogistic remedies, and in three weeks she regained her usual health.

On the 13th of February, 1843, she had a slight attack of pneumonia of the lower anterior part of the right lung; she had also bronchitis on both sides. She recovered in a week from the acute symptoms, though afterwards she was always affected with a troublesome cough.

On the 10th of March she had spasms of the diaphragm; they continued for three or four days, intermitting occasionally for a few hours. The inconvenience was not sufficient to confine her to the chamber. Until this time the pulse had been regular, and always corresponded to the degree of fever present.

On the 26th of March she had obstinate vomiting, not accompanied by tenderness at the epigastrium, nor by thirst for cold drinks, nor by constipation, nor by any cerebral symptoms whatever. The vomiting continued four days; it was always increased by drinks, though the efforts frequently persisted while the stomach was quite empty. During the intervals her pulse was 80, feeble and regular.

On the 5th of April she had pain in the heart. During my attendance to the previous illness of the patient, my prescriptions had been so much neglected that I declined visiting her any more; therefore I did not examine her symptoms particularly when called on at this time, (5th of April,) but requested the friends of the patient to seek advice elsewhere.

On the 8th of April she was visited by Dr. Franklin Bache, who detected the existence of pericarditis, accompanied by a very irregular and feeble pulse. From inattention on the part of the patient to Dr. Bache's prescriptions, his visits were continued only four days. She was then attended by Drs. Watson and Arrott, who found her in a very

prostrate condition, with irregular pulse, and sometimes so feeble that it could scarcely be felt; she had also the usual symptoms of pneumonia.

On the 15th of April she had œdema of the feet; and two days afterwards her face was somewhat swollen.

She died on the 27th of April, nearly nine months after the needle had entered her body.

On examination after death, the right lung was found adherent throughout to the costal pleura; both lungs were congested, and the bronchia inflamed; at the posterior inferior part of each lung there was some hepatization. The pericardium contained more than a quart of fluid blood; its surface was covered with deeply reddened lymph; some of the recesses formed by small folds of the pericardium, or by adhesions near the upper part of the auricles, were filled with grumous blood; there were adhesions at the under surface of the heart, particularly under the right ventricle, and in a line parallel with, and half an inch from the septum. The heart was small and flaccid, containing only small coagula. On opening the left ventricle the point of a needle was seen protruding a quarter of an inch towards the middle of the cavity. The needle had passed at the under surface of the heart about three-quarters of an inch from its apex, and half an inch from the septum, through the wall of the right ventricle, through a columna carnea, through the septum and into the left ventricle. It was fifteen lines in length; its head, somewhat incrusted, was imbedded in the wall of the right ventricle, just under the surface of the pericardium. The orifice made by the needle seemed to have been completely closed by coagulable lymph; but it would be very easy for a small channel to escape detection in such a mass. The internal membranes of the heart were smooth and shining, without any marks of inflammation; all the large vessels were in excellent condition.

Although the patient could never point to the situation of the needle, and was always unconscious of its presence in any particular part, yet, during my attendance, I never doubted that it was the cause of all her ailments. I presume it first lodged obliquely in the intercostal muscles, or was made to do so by her own attempts to discover its situation; it then passed through the pleura, and probably a portion of the lung, reaching the floor of the diaphragm; it then seems to have moved near the œsophagus, irritating some filaments of the par vagum; and finally, it reached the heart.

The blood in the pericardum may have derived either from the cavities of the heart, or from the inflamed adhesions, or from both. In the first case, we may suppose that every contraction of the heart separated the muscular fibres sufficiently to allow the blood to pass along the sides of the needle; and the separation of the fibres of the walls of the right ventricle would be greatly favoured by the *working* of the needle, caused by its extremities being subjected to differently acting forces. It is true no channel through the adhesions of the pericardium could be detected; but in the relaxed condition of the heart a small channel through coagulable lymph would necesarily escape detection. From whatever source it derived, the blood was of good appearance, resembling thst drawn from the arm of a moderarely anemic person; it therefore could not have been much diluted by serum from the inflamed pericardium.—*Philadelphia Medical Examiner.*

PHARMACEUTICAL SOCIETY.

REGULATIONS ADOPTED AND CONFIRMED BY THE COUNCIL, FOR THE EXAMINATION AND REGISTRATION OF MEMBERS, ASSOCIATES, AND APPRENTICES.

CANDIDATES for the major or minor examination must send in their testimonials to the secretary, on or before the 1st day of the month, which testimonials must consist of—

For the minor examination, either an indenture of apprenticeship, or a certificate from a chemist and druggist, with whom the candidate has been regularly educated.

For the major examination, a similar testimonial, if the candidate be not already an associate of the Society; and he must show to the satisfaction of the board that he is in business on his own account, or intends to commence, or that he has been an assistant for the term of five years since the expiration of his pupilage.

The minor examination for the certificate of qualification to act as an assistant to a chemist and druggist, and to become an associate of the Society, is conducted in the London Pharmacopœia; embracing an elementary acquaintance with chemistry, materia medica (including a knowledge of the external character of indigenous medicinal plants), practical pharmacy, physicians' prescriptions, and the antidotes for common poisons.

The major examination for the diploma, as a member of the Society, is on the same subjects, but on a more extended scale.

Apprentices coming to reside within ten miles of London, must present themselves for the classical examination at the Society's house; beyond that distance, they are at liberty to undergo the examination by any qualified person, whose certificate, if satisfactory, will be received by the board.

Notice must be given to the secretary, on or before the 1st of the month, by apprentices coming up to the board in London; and forms of the certificate for the county

may be had on application to the secretary, which, when filled up, must be returned: when, if approved by the board, the pupil will be registered (and, on payment of the annual subscription of one guinea, will be entitled to enjoy the privileges of an associate).

The fee for registering the apprentices or pupils of members, is five shillings; if the master be not a member, the fee is ten shillings and sixpence. Every apprentice or pupil not registered within twelve months after the date of his indentures, must pay a fee of one guinea on presenting himself for examination as an associate (and those who neglect to register cannot be admitted to the privileges of an associate, without the special permission of the council).

The board of examiners meet on the third Tuesday in each month throughout the year, except in May and September, at eleven o'clock in the morning.—*Pharm. Journal.*

EFFECTS OF MEDICINES ON HORSES.

By Mr. Percivall.

Lead.—As an external medicament, no substance has been held in greater estimation, or been more generally used, than lead; and though surgeons of the present day ascribe less efficacy to it than did Goulard and his followers, yet it is still a frequent and favourite application to inflamed or swollen parts, and one that is believed to be productive of a great deal of benefit. Many veterinary surgeons are likewise in the habit of employing "Goulard lotion," as it is commonly called—the *liquor plumbi diacetatis dilutus* of the present London Pharmacopœia—but with what amount of efficacy seems rather doubtful. Professor Coleman declared it to be, for horses, in any strength, no better than so much cold water. And I must confess, though I use it, I have my misgivings, myself, about its local operation. It has one decided advantage—it has the appearance of being, and is by the public considered to be, *medicinal.*

What, perhaps, has tended to confirm its topical efficacy in human medicine has been its known power of producing even deleterious effects when administered in very small quantities as internal medicine: nay, the very effluvia of the mineral arising from surfaces recently painted is sufficient to excite in some persons very unpleasant effects or sensations; and we all know how generally unhealthy is the aspect of men employed in painters' work. This has deterred surgeons from prescribing lead to the degree or extent they otherwise might have none; and though they do so on occasions, in some diseases, with manifest advantage, every now and then it has happened that very unexpected and alarming symptoms have followed its exhibition. In respect to horses, I have given the *acetas plumbi*—the sugar of lead, as we call it—both in glanders and in periodical ophthalmia: in neither disease, however, with any visible benefit. Its exhibition was as follows:—

To the first, a glandered horse, it was administered for several days in half-ounce doses morning and evening, without producing any effect, either on the disease or state of health of the animal.

To the second horse, having periodic ophthalmia, it was given in ounce doses twice a day for five days, without any noticeable result.

To the third horse, glandered, it was given on the first day, in the dose of an ounce morning and evening; on the second this dose was doubled; and on the third and fourth days, the two-ounce doses were continued morning and evening. On the fifth day the horse refused his food, and had an intermittent pulse; therefore the medicine was omitted. On the sixth day, however, the same doses were repeated; which on the seventh day produced such alarming return of the symptoms of nausea, dejection, and derangement of the pulse, that the medicine was from this time disconinued altogether.

In neither case did any symptoms of colic or palsy present themselves.

Zinc.—Another of the metals which, in veterinary medicine, has been more used as an external than an internal remedy: indeed, zinc has hardly yet found a place in our pharmacopœia as a medicine. I have notes by me giving some account of the exhibition of the *sulphate of zinc:* I have, myself, since administered in considerable doses the *oxide.*

Sept. 2d, 1804.—Two horses, in good condition, though having chronic discharges from the nostrils, commenced with taking doses of half an ounce of the sulphate three times a day, which they continued until the 14th, without manifesting any change either in appetite, pulse, or general appearance. The dose was now augmented to an ounce thrice a day, and at the expiration of four days from this, both horses manifested nausea, and appeared salivated, and refused their food. The medicine was discontinued for three days, and then resumed; it having been remarked in the interval that large quantities of urine had been voided. Two days afterwards, the disease in the nose having shown a tendency to spread, one horse was destroyed. His stomach displayed inflammation upon its vascular lining; but there was no other disease. To the other, the doses were still farther augmented, but without any novel result.

April 1st, 1813, a brown gelding came under my care for treatment for glanders. He was but three years old, and looked well in health and fine in his coat, although he

had two distinct ulcerations inside his off nostril; his submaxillary glands enlarged on the same side; with corded absorbents and two or three ulcerations upon the off shoulder. He feeds well and his bowels act regularly.

Let him take, morning and evening, half an ounce of the oxide of zinc, in ball, and have his swollen glands blistered, and his ulcers dressed with solut. cupri uslphat.

3d.—Increase the dose to one ounce twice a day.

5th.—Let him take his ball thrice a day: there being as yet no visible alteration, excepting that the ulcers in the nose are spceading. Apply to them red precipitate powder.

9th.—The medicine is not producing any effect. A fresh ulcer is visible in the nose. Let him take two ounces morning and evening.

10th.—Some knotty tumefactions are to be felt upon his quarters, and his hind legs have taken to swell.

11th.—The ulceration inside the off nostril is rapidly spreading, though its appearance has been improved by the red precipitate. Two small ulcers, however, are now discoverable upon the *near* side of the septum. Continue balls.

13th.—The hind legs are so much swollen that exercise is deemed requisite. The appetite, however, continues good, and there is no perceptible loss of flesh. Augment the ball to three ounces of zinc twice a day.

14th.—The disease keeps extending, but tardily. On this account the medicine was discontinued altogether, and the horse—after an interval—made the subject of a fresh experiment, the zinc having taken no effect whatever upon him.—*The Veterinarian.*

RECENT ELECTION AT ST. GEORGE'S HOSPITAL.

THE Editor of the MEDICAL GAZETTE is particularly requested to insert the enclosed note in the next number of the GAZETTE.

ELECTION AT ST. GEORGE'S HOSPITAL.

To the Editors of the Provincial Medical Journal.

GENTLEMEN,—Your Journal of the 23d, which has this day reached me, contains an account of the late election at St. George's Hospital, which states that I "was supported by all Sir Benjamin Brodie's influence."

I beg you will admit in your next number my denial of that assertion.

I ws not supported directly or indirectly by Sia Benjamin Brodie, who neither voted nor took any part whatever in the election.

I am, Gentlemen,
Your obedient servant,
CHARLES HAWKINS.

The Court Yard, Albany,
Dec. 28, 1843.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, December 29, 1843.

T. W. Houchen.—T. Coulson.—B. Baker.—A. Gosden.—B. Kemp.—J. B. Bridick.—J. H. Brown.—E. Wadams.—H. L. Hogg.—T. T. Chadwick.—H. J. Stokes.—W. Crofton.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, Dec. 21, 1843.

A. Parr, Liverpool.—S. Pratt. E. I. C. Service.—J. H. Llewelyn.—S. N. Elliott.—J. E. Hebblethwaite, Oporto.

Thursday, Dec. 28, 1843.

G. Keane, Ongar, Essex.—K. Burton, Wainflete Lincoln.—W. E. G. Wilson, Leeds.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, December 23, 1843.

Small Pox	11
Measles	29
Scarlatina	49
Hooping Cough	39
Croup	15
Thrush	3
Diarrhœa	5
Dysentery	5
Cholera	0
Influenza	2
Ague	0
Remittent Fever	1
Typhus	25
Erysipelas	6
Syphilis	2
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	140
Diseases of the Lungs and other Organs of Respiration	329
Diseases of the Heart and Blood-vessels	21
Diseases of the Stomach, Liver, and other Organs of Digestion	71
Diseases of the Kidneys, &c.	6
Childbed	12
Paramenia	0
Ovarian Dropsy	1
Disease of Uterus, &c.	2
Arthritis	0
Rheumatism	1
Diseases of Joints, &c.	3
Carbuncle	1
Phlegmon	0
Ulcer	0
Fistula	0
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	92
Old Age or Natural Decay	55
Deaths by Violence, Privation, or Intemperance	25
Causes not specified	17
Deaths from all Causes	968

WILSON & OGILVY, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, JANUARY 12, 1844.

ON PNEUMO-THORAX:

AN ESSAY,

Read (in part) at the Physical Society of Guy's Hospital,

By H. M. Hughes, M.D.

One of the Assistant Physicians to the Hospital.

[Continued from p. 440.]

The diagnosis of pneumo-thorax, with the aid of auscultation, percussion, and succussion, has usually been represented to be an affair of great simplicity, and when the entire progress of any case has been witnessed by any one observer, when the accession and the whole of the ordinary phenomena of the affection are well defined, when, in fact, pneumo-thorax exists as it is usually described in books, a very simple affair it is. But every really practical and observant physician is aware that at the sick man's side doubts and difficulties will occasionally arise, even in those diseases which upon paper are represented in characters apparently so clear as not to be mistaken. The diseases or conditions with which pneumo-thorax may conjecturally be confounded, are—1st, emphysema of the lung; 2dly, the tympanitic resonance said to occur during the progress of pneumonia; 3dly, a flatulent stomach overlaid by a consolidated lung; and 4thly, phthisical cavities. Of the two first I shall say nothing. The former of the two I have, indeed, mentioned only because it has been customary to do so, as I believe that with moderate attention to the history, symptoms, and physical signs, it is scarcely possible that a mistake can arise. Of the latter of the two I forbear to speak, because I can say nothing derived from my own experience, unless indeed, as I already expressed my conviction, it may be referred to the third condition mentioned; viz. a stomach distended with gas, and overlaid by a solid and contracted lung. In this combination the absence of respiration and the tympanitic resonance on percussion are often complete, and succussion occasionally exists. The side is contracted indeed, but sometimes, though rarely, it is likewise so in pneumo-thorax. The ribs are but slightly elevated, or almost motionless, and I believe that in a few rare examples the only circumstances upon which we can rely for the diagnosis of the two affections are the fistulous, metallic, or amphoric breathing, and the metallic ringing of the voice, and cough, which are constantly present in the one affection; the want of completeness, uniformity, and consistency in symptoms and signs of the other, and the history of the respective cases.

But of all diseases a large phthisical cavity is by far the most liable to be confounded with, and the most difficult to be diagnosticated from, pneumo-thorax. I lately saw a case examined in the hospital, in which one immense cavern occupied the whole of the left lung, and in which, even after death, it was for some time difficult to decide whether the cavity was in the pleura or the lung itself. In such a case, excepting the history, I know of no circumstance whatever upon which a diagnosis could be formed, with even tolerable certainty. A few years since there was an elderly woman in the hospital, in whom all the facts of the history, the symptoms, and physical signs, led to the supposition of the existence of pnuemo-thorax, with the single exception of the cavern being situated at the upper third of the lung. Upon inspection after death, a very large and old vomica was found, with firm and hard parietes, and nearly all the remainder of the lung dry, tough, and airless. In another case examined last year, a circumscribed pneumo-thorax, of the size and shape of a fœtal head, existed in the left mammary region, which presented all the physical characters of a large vomica. I lately attended a young medical man, during whose last illness I had once the advantage of meeting a physician of considerable reputa-

tion as an auscultator. The disease had been pneumonia, supervening, as I believed, upon chronic tubercular disease of the lung, and terminating in rapid phthisis. In the left mammary region there was evidently a large cavity, indicated by tympanitic resonance on percussion, amphoric breathing, and metallic resonance of the voice. The accomplished physician referred to expressed his belief that pneumo-thorax existed. I differed from him in this opinion; but I was induced to do so only because, having had the advantage of watching the case throughout, I had observed the consolidated lung to soften down; the cavity to appear and gradually to enlarge, and because the sputa for several weeks had been those of advanced phthisis, excepting when temporarily increased by a passing attack of bronchitis. The body was not examined after death.

A phthisical cavity, indeed, may be accompanied with all the symptoms and auscultatory signs of pneumo-thorax, and pneumo-thorax only by those of a phthisical cavity. The diagnosis in a vast majority of cases may, notwitstanding, be effected with facility, and in circumstances of difficulty may be assisted by the following considerations. In simple phthisis, the tympanitic resonance, and the metallic tinkling (not common in any form), is very rarely so well marked as in pneumo-thorax, while succussion is so very unfrequent in the former, as never with certainty to have been heard by myself, or as far as my knowledge extends, by any one with whom I am acquainted. Laennec is reported to have heard it on one occasion. In pneumo-thorax the chest is *generally* enlarged; in simple phthisis almost always contracted. In the former affection the patient usually lies on the affected side; in the latter upon either side, or upon the back indifferently. In pneumo-thorax the cavity is commonly at the lower part of the chest; in simple phthisis the chief excavation is almost universally at the upper part.

On the *prognosis* of pneumo-thorax I need say nothing, as I believe in all cases hitherto noticed it has proved ultimately fatal; unless, indeed, the case first related in this paper may be regarded as an example to the contrary. The varying duration of the complaint will be best estimated by a portion of the following brief view of the statistics of sixty-two cases. Nearly half of these have either fallen under my own notice or are recorded in the hospital books; the remainder have been collected from the writings of modern authors, and have in all instances been examined by myself.

Of sixty-two cases of pneumo-thorax there were—

Males	48
Females	14—62

The left side was affected in—

Males	28	36
Females	8	

The right side was affected in—

Males	20	26
Females	6	
		62

The age of the patients was under 20 in—

Males	8	9
Female	1	

The age of the patients was 20, and below 30, in—

Males	19	26
Females	7	

The age of the patients was 30, and below 40, in—

Males	11	16
Females	5	

The age of the patients was 40, and under 50, in—

Males	6	7
Female	1	

The age of the patients was above 50, in—

Males	3	62
Was not mentioned 1 male.		

As the statements concerning the duration of life in the sixty-two individuals whose histories I have examined, were in many instances very indefinite, while in some others, in consequence of the uncertainty connected with the accessory period, it was not possible that it could be determined, the following table is necessarily very defective. I have, however, endeavoured in each case where it was possible to calculate the period exactly, and whenever the duration of the complaint was not to be distinctly ascertained, I have called it "uncertain," or "unrecorded."

Duration of life in sixty-two cases of pneumo-thorax:—

"A few hours"	3
Less than twelve hours	2
Twelve hours, and less than forty-eight hours	4
Forty-eight hours, and less than one week	10
"Some," "several," or "many" weeks	5
One week, and less than one month.	4
One month, and less than three months	5
Three months, and less than one year	8
Twelve months (at least, Dr. Houghton)	1
Thirteen months (Dr. Stokes) . .	1
Three years (at least, Dr. Barlow) .	1
Uncertain, or unrecorded	18
	62

The treatment of pneumo-thorax.—I have little to say—indeed, I believe there is little

to be profitably said—upon this part of my subject, as little can be advanced in reference to the means of affording temporary relief except what is necessarily general, and as, according to all known experience, no specific plan of treatment can be recommended with a prospect of effecting a permanent cure. Symptoms are to be met as they arise. Gentle means are to be employed for their mitigation or removal. Quiet, stimulants, and nutritious food, or sedatives and even antiphlogistics, general or local, may be required in the ever varying circumstances of each case. No rules can be consistently laid down. No plan of treatment can be with propriety prescribed as universally or even generally applicable.

The only questions, indeed, which admit of discussion, are the necessity, the propriety, and the time of performing the operation of paracentesis.

The opinions, or the practice at least, of almost all modern physicians, appear very nearly to coincide upon these points, and the belief seems now to be common that, excepting for the purpose of affording relief to the distressing dyspnœa, paracentesis is not to be recommended in pneumo-thorax.

In the tables published by the late Dr. Davis, of twenty-nine cases in which paracentesis was performed, the following were the results :—

16 empyema	12 recovered	4 died.
9 pneumo-thorax	none	9 died.
4 hydro-thorax	none	4 died.

Among the cases which constitute the table from which the previous numbers as to age, &c., have been taken, I find that of seven only it is stated that paracentesis was performed.

Of these—

1 died four hours after the operation, and was thereby not relieved.

1 died twenty-four hours after, not relieved.

1 died forty hours after, not relieved.

1 died sixty hours after, relieved.

1 died six days after, relieved.

1 died twelve days after, not relieved.

1 died sixteen days after, relieved.

From these facts, together with those previously mentioned from Dr. Davis, it appears evident that the operation of paracentesis affords not any prospect of effecting a cure of pneumo-thorax, and that in many cases experience warrants but little hope of its affording even temporary relief. When, indeed, it is recollected that in numerous examples the egress of the gas remains perfectly free, it appears difficult to understand upon what intelligible principle the operation, at least in such cases, can be recommended with even a fair prospect of success. A free opening already existing, I must confess my own inability to comprehend why another should be required. There are, however, three conditions under which I imagine it may possibly be advantageous to perform paracentesis in pneumo-thorax. First, when the accession of the complaint is marked by great anxiety and general distress, arising from excessive dyspnœa; secondly, when, after a considerable duration of the complaint, gradually increasing dyspnœa supervenes, in consequence of the egress of the air being prevented or obstructed by an accidental fold of membrane, plastic pleuritic effusion, or bronchial secretion; and thirdly, when fluid effusion is added to the other effects of the accident, and accumulates in such quantity as materially to embarrass the respiration, and thus increase the distress already existing. In these circumstances, as purulent, or sero-purulent fluid, may require a dependent opening for its exit, the operation may be fairly expected to be followed by temporary benefit.

We may perhaps be allowed hence to state the general law, that in pneumo-thorax proceeding from disease, and not from external injury, the operation of paracentesis offers little prospect of advantage, and is therefore not to be recommended, except for the purpose of relieving urgent symptoms of dyspnœa and anxiety, caused by the accumulation of gas or of sero-purulent fluid.

Much, however, may be done in many instances, as I know by experience, to render the life of the patient easy, and even tolerably comfortable. The *juvantia* and *lædentia* cannot be here specified, as they will necessarily vary more or less with the particular circumstances of each case. Stimulants may be here required, and sedatives may be beneficially prescribed there; but in almost all cases, though we may have the sad conviction that our best-directed efforts cannot save or permanently restore our patient, we may possess the melancholy gratification of contributing, by kindness, by attention to position and diet, and the judicious administration of medicine, to mitigate his sufferings, or to relieve his pain, and thus to procure for him a tolerably quiet and moderately comfortable existence. "Proud science," says Dr. Houghton, with much feeling eloquence "may draw back from what seems to be beyond her realm; but the physician has higher instincts to obey and duties to perform here, as in other hopeless diseases, in attempting even the mitigation of the pain and anguish which science tells him he cannot altogether remove; and this reflection may be added, that where such motives actuate him to exertion, he is seldom left entirely without the satisfaction which obedience to them brings."

I proceed now to relate a few of the cases which I have seen, and of which I have fortunately preserved or obtained notes.

CASE III.*—*Diffused Phthisis—A single small cavity—Pneumo-thorax—Opening not discovered—Death in thirty-four hours.*

C. A., aged 22, a weak and delicate-looking woman, of light complexion, came under my care as a patient at the Surrey Dispensary, July 20th, 1839. She resided at Lambeth, was occupied as a sempstress, and had been troubled with weakness and pain of the back for some years, and had attended as an out-patient at Guy's Hospital in consequence. She had not, however, been troubled with cough of any severity or constancy till three weeks before I saw her. She had never suffered from hæmoptysis. Her father was dead; she had a mother, and some brothers and sisters, in good health. At my visit I found her in bed, very feeble, pallid, and nervous. She complained of cough, with tightness of the chest, and rather copious mucous expectoration; the tongue was pale, clean, and moist; the pulse small, feeble, and very frequent; the catamenia irregular, and accompanied with pain. She was so excitable as to prevent any useful examination of the chest by either percussion or auscultation. But from the imperfect exploration I was enabled to make, I believe the signs were those of bronchitis. If phthisis existed at all, the tubercles were generally diffused throughout the lungs. She was at first treated with expectorants and counter-irritants, and subsequently with emetics, and iodine combined with sedatives, and improved so much in a week or two as to take tonics with obvious advantage. About the end of September she had a fresh attack of bronchitis, with considerable febrile excitement. I now thought it necessary to apply a few leeches below the clavicles, and to follow them with a blister to the sternum, and to administer small and repeated doses of antimony, blue pill, and opium. The soreness of the chest was thereby considerably lessened; the cough, however, continued, and her debility was advancing; the pulse, always rapid, had increased in frequency, and emaciation of the face and limbs was perceptible an progressive. In the middle of the night of October the 9th, after a day passed as well as, or rather better than usual, she had a fit of coughing, remarkable neither for its violence nor its duration, which was immediately followed by excessive dyspnœa, accompanied with pallor of the face, clamminess of the surface, and other evidences of collapse, and also *with flatulence of the stomach and bowels, but without pain.* She continued in this state till I saw her twelve hours after, when I found her lying on the right side; the face and body bedewed with clammy perspiration; the extremities cold the respiration hurried and anxious, and the pulse excessively feeble and rapid. Any attempt at moving the body appeared to add to her distress, and to endanger her life so much that no efficient examination of her chest could be made, and the only facts ascertained as to its condition were, that the right side was very resonant on percussion, and that the resonance extended behind the sternum. She had no cough, but was still troubled with flatulence. Sinapisms were ordered to be applied to the scrobic. cordis and to the feet, and ammonia and brandy to be administered internally, but they produced no effect. She never rallied from the state of collapse, and expired at 10 A.M. the next morning, about thirty-four hours after the accident.

Inspection 24 hours after death, kindly performed in my absence by Mr. Nettlefold and an assistant.—The head was not opened. On removing the sternum, air escaped with a hissing noise from the right pleura. The lung was reduced to one-fourth its ordinary size, and adhered superiorly to the pleura costalis. It was studded in every part with miliary tubercles, which appeared to have softened in no other situation than in the mammary region, in which existed close to the surface a cavity the size of a nutmeg. The pleura was filled with air alone, contained no liquid effusion, and presented no evidence of recent inflammation. The mediastinum and its contents were pushed much to the left side. No aperture was discovered in the pleura, but the lung was not inflated by the blow-pipe. On the left side the lung was greatly congested, and sprinkled with tubercles, which were generally immature, but were in some parts just beginning to soften. The heart was small and flabby. The abdomen was not examined.

This case presents a very fair example of the effects of pneumo-thorax occurring from a lung not extensively diseased, and causing therefore a sudden and almost total arrest of the circulation in one-half of the respiratory organs. The rush of gas which occurred on opening the chest, together with the pressure of the mediastinum to the left side, appears to indicate that the air, after the collapse of the lung arising from its own elasticity, entered in larger quantity, or with greater facility, than it escaped from the pleura, if, indeed, during life it escaped at all, and renders it probable, therefore, that some transient relief at least might have been afforded by paracentesis, which I have ever since lamented was not in this instance performed. The absence of pain, and all indications of pleuritis, the single and small cavity near the surface of the lung, and the complaint of great flatulence of the stomach and intestines, are also worthy of notice, as it has been supposed by some that pleuritis and

* Cases 3 and 4 have been previously published by me in the "Reports of Cases" in the MEDICAL GAZETTE.

consequent pain are among the almost necessary results of the accident, and as I do not remember to have observed that flatulence has been a prominent symptom in other cases.

CASE IV.*—*Diffused phthisis—No cavity — Pneumothorax — Opening not discovered—Death in ten hours.*

A very fine young gentleman, aged 19, of light complexion, whose father and mother were alive and in good health, but one of whose brothers had died from phthisis, was suddenly attacked with hæmoptysis without any previous cough, or other assignable cause. After a fortnight he became apparently convalescent, and went to the sea-side for change of air. When he had been there for three weeks, and while he was apparently without complaint, he was suddenly attacked with extreme dyspnœa, and died in about ten hours.

Inspection, 24 hours after death.—Percussion elicited a remarkably clear sound on the left side of the chest, while the right side was dull, particularly posteriorly. The head was not opened.—*Chest*: On dividing the cartilage of the fifth rib on the left side, gas escaped with a wheezing noise. Two-thirds of the left side were filled with air, the remaining third being occupied by the collapsed lung, the upper lobe of which was adherent to the pleura costalis by old and firm cellular membrane. In every other respect the pleura appeared healthy. The left lung was throughout sprinkled with tubercles, some of which, close to the surface, caused elevations to appear on the pleura pulmonalis, but none were observed to have formed a cavity, or to have caused ulceration of the serous membrane. No aperture in the pleura was in fact discovered, but the lung was not inflated. The right pleura pulmonalis was firmly adherent to the pleura costalis and pericardium. The apex of the right lung contained some immature tubercles. The two inferior lobes were simply congested. The pericardium was firmly adherent to the sternum and to the pleura covering the cartilages of the ribs on the right side and the right lung, and, together with the heart, was pushed upwards and to the right. The pericardium contained rather more fluid than usual, and the heart was flabby and thin. The state of the abdominal viscera was not recorded, if examined.

The only observation that I think it necessary to make upon this case, as the history and symptoms are so defective, is, that it affords another illustration of the severe distress and rapid death occurring after the escape of air into the pleura in cases where little, comparatively little, disease exists in the lung, and where, from the opening not having been discovered, it may be fairly presumed, I think, to have been small—a severity and rapidity, however, which, in this instance, was probably materially augmented by the curious adhesion of the pericardium to the sternum and costal pleura.

* This case was not seen by myself, but was communicated to me by Mr. Nettlefold, who examined the body, and is introduced here as a rather remarkable example of the complaint.

CASE V.—*Phthisis—Empyema—Pneumothorax—Dulness on percussion—Death in about ten weeks.*

Thomas Davies, aged 28, a tall, thin labourer, of light complexion, was admitted into Guy's Hospital, under the care of Dr. Back, September 18th, 1839. After having suffered from cough, and the general symptoms of phthisis, for some weeks, he was about two months previously to his admission attacked with severe dyspnœa and general distress, without pain, which caused him to desist from his work, and go home to bed. On admission he lay somewhat inclined to the right side, which was not elevated during inspiration, and which to the eye appeared, but upon admeasurement was not found to be, larger than the left. Dulness on percussion existed in the whole of the right side, except just below the clavicle, where the resonance was not greater than natural. In this situation, and close to the dorsal spine alone was heard some bronchial respiration mixed with mucous rattles. In other parts of this side the breathing was strikingly amphoric, and was occasionally accompanied with metallic tinkling. A splashing noise (Hippocratic succussion) was easily produced by any sudden motion of the body. His breathing was not much accelerated, nor was he much troubled with cough; but his pulse was always rapid and feeble. On turning to the left side he expectorated large quantities of sero-purulent fluid. On the left side below the clavicle were heard gurgling and pectoriloquism; the other parts of this lung appeared comparatively free from disease. He lingered in this state about three weeks without any remarkable change of symptoms, excepting that he got gradually weaker, and his lower extremities became œdematous. He died Oct. 8, 1839.

Inspectio Cadaveris.—The head was not opened.—*Chest:* the right pleura was much thickened, covered with a soft, flocculent, albuminous deposit, and contained about forty ounces of thick cream-like purulent fluid. The remainder of this side of the chest, not occupied by the greatly compressed lung, was filled with air, which was, however, not in large quantity, as the mediastinum was not displaced. The lung was superiorly adherent to the pleura costalis, reduced to about one-third its ordinary size, and contained several small vomicæ, and

tubercles distributed throughout nearly its whole extent. Four of these were situated near the surface, and two of them—one the size of a pea—the other as large as a hedge-nut—communicated through considerable openings with the pleural cavity. The left lung was also adherent superiorly to the pleura costalis, and contained several small vomicæ, surrounded by pneumonic consolidation. The bronchial tubes of both lungs contained much purulent fluid; and the larger branches were considerably injected, and slightly granular. The pericardium was healthy. The heart was much dilated, flabby, and thin. This was especially remarkable in the right ventricle, which contained several rounded masses of fibrine, "globular fibrinous concretions," most of which were not larger than peas or small beans, and were lodged in the depressions of the musculi pectinati, but one of which, situated in the apex, was as large as a walnut; its external surface, smooth at some parts, and at others sending off prolongations, which interlaced with the muscular bands, was in contact with, but not adherent to, a mass of coagulated blood. Its walls were about one-eighth of an inch thick, soft, dull, and opaque. It was filled with an opaque albuminous fluid, having the appearances of pus, but which, though not examined microscopically, I believe, as I have already expressed my conviction in reference to similar cases, to have been merely softened or broken-down fibrine.—*Abdomen:* The liver was large, turgid, and myristicate. The kidneys were also large, and congested. The spleen, pancreas, stomach, and intestines, were not observed to be diseased.

The circumstances in this case particularly worthy of notice are, in the first place, the co-existence of dulness on percussion with most of the other physical signs of pneumothorax. This, which I had myself an opportunity of verifying on several occasions, was sufficiently explained after death by the considerable quantity of semi-solid and fluid effusion in the pleura, by the complete collapse of the lung being prevented by the tubercular deposit which it contained, and by the *accumulation* of air being prevented by its free egress through two openings of considerable size. In the second place I may remark that it is at least a curious coincidence, that in this, and in a case to be subsequently related, a well-marked fibrinous concretion, of considerable standing, was found in the apex of the right ventricle, the situation in which, in consequence of the obstruction to the flow of blood through the lungs, the delay would be the greatest. This obstruction causing delay, together with great prostration of the power of the patient, and consequent feeble action of the heart, as has been already stated in a paper on "Fibrinous Concretions in the Heart," in the Guy's Hospital Reports, is probably the principal, if not the sole, cause of the formation of that modification of these bodies which was observed in the case under review.

For a record of the following case I am indebted to the notes of Dr. Grant, Staff-Surgeon 2nd Class, formerly in charge of the Military Depôt at Maidstone, and now in India; and to the kind assistance of Mr. Prance, Surgeon, of Maidstone, with whom, together with Dr. Sebbald, of that town, I had an opportunity of exploring the chest of the patient, and of verifying all the principal symptoms and physical signs. Dr. Grant's notes are very long. I have taken the liberty of condensing them considerably.

CASE VI. — *Phthisis — Pneumothorax — Empyema—No symptoms indicating the accession of the complaint — Extensive tubercular deposit — Death in about two months.*

Wm. Moran, aged 18, of spare habit and scrofulous diathesis, a private and bandman, blowing the opheicleide in the 13th Regiment of Light Dragoons, had enjoyed good health till two months before, when he suffered from catarrh and cough following exposure to wet, and was admitted into the Regimental Hospital, where he stayed two weeks. He then performed his duty for nearly a month, and was sent to the Maidstone station on furlough. After three weeks' residence he was admitted into the Depôt Infirmary, January 12, 1841. He then complained of hard cough, with greenish mucous expectoration, oppression of the chest, dyspnœa, debility, and nocturnal perspirations. The left side of the chest was particularly resonant on percussion, and afforded metallic tinkling over nearly its whole extent; pulse 120, and irregular; heart's action tumultuous. Ordered a blister and an expectorant mixture, with Tr. Digitalis, &c. &c. His medicines were subsequently varied without any obvious advantage or marked effect, except that of procuring sleep.

On January 25th, about the day on which I saw him, little alteration had taken place, and the symptoms were as follow:—Cough pretty frequent, with greenish expectoration; pulse 112, and small and feeble, but distinct; tongue natural; skin soft. He lay on his back, but could turn to either side, or sit up in bed, without increased distress. The left side of the chest was perceptibly larger than the right. Impulse of the heart was felt distinctly and solely on the right of the sternum, and indistinctly below the right clavicle. The right side was dull on percus-

sion; pleuritic rubbing was heard pretty generally, but was most distinct inferiorly and posteriorly. Large mucous rattles were heard below the right clavicle, the respiration was bronchial, and bronchophony was distinctly audible in other parts of this lung. The left side was very resonant on percussion; and the respiratory murmur was entirely absent, excepting over a small space on the inner side of the infra-clavicular and mammary regions, where it could be scarcely heard. Amphoric breathing, metallic tinklings, metallic resonance of the voice, and cough, and Hippocratic succussion, were very distinct about the lower edge of the scapula, and were audible, though less obviously, in other parts of this side.

Ordered Decoct. Cinchonæ, &c. during the day, and Morphia at bed-time.

I find no circumstance related particularly worthy of notice till the 29th, when it is stated that he passed the night on the right side, and was then sleeeping quietly on the left; that the cough was only occasional, and not distressing; the pulse was 130, and very weak; and that the two sides were becoming equal in volume.

Feb. 21st.—He was able to get out of bed and sit up each day; the dulness of the right side had, in a great measure, disappeared; and the enlargement and rotundity of the left had given place to a more natural configuration, the intercostal spaces being depressed as upon the opposite side. He slept well at night under the influence of morphia, and was but little troubled with cough; appetite good.

March 16th.—Went down stairs for half an hour this day.

20th.—Sent for in haste, and found him with hurried respiration, lying on his back; face purple, and extremities cold; pulse not perceptible; dosing, and speaking with difficulty; in no pain, and perfectly sensible; respiration very short, and hurried. He was temporarily rallied by hot brandy and water, and other stimulants, but soon relapsed into the same drowsy state, and wished to be allowed to go to sleep, and in this state quietly sank at half-past ten o'clock.

Inspection, twenty-four hours after death.—The *Head* was not opened.—*Thorax:* The left pleura was lined with a firm layer of lymph, one-sixteenth of an inch thick, and contained more than three pints of straw-coloured serum, in which were suspended large flakes of fibrin. The lung was greatly compressed, and lay close to the mediastinum. A small portion of the lower part of the upper lobe was alone crepitant, and corresponded in situation to that part of the chest in which respiratory murmur was sometimes heard during life. The remainder of the lung was occupied either by tubercular deposit or small cavities, some of which contained some soft cheesy matter. One cavity, as large as a small egg, was quite empty, and communicated with the pleura by a circular aperture with rounded edges, half an inch in diameter. It was situated two inches from the summit of the lung, which was firmly adherent to the pleura costalis, as was the base to that covering the diaphragm. The pleura covering the upper and middle lobes of the right lung was adherent by recently effused plastic lymph. About eight ounces of clear serum existed in the lower part of the sac. The upper lobe contained one cavity capable of holding two ounces, and others of smaller size; the remaining portions of the lobe being perfectly airless, from tubercular deposit and grey hepatization. The middle lobe contained a few small cavities; and the lower lobe was crepitant and fairly healthy, independently of cadaveric congestion. The pericardium contained three ounces of serum, and was firmly adherent to the right pleura; it was thus preserved in its situation on the right of the sternum, when all support was removed. The heart was healthy.—*Abdomen:* The peritoneum contained eight or ten ounces of fluid, and, in some parts, bore evidence of recent inflammation. The liver, spleen, pancreas, stomach, and large intestines, presented nothing remarkable. The mucous membrane of the small intestines was much diseased from tubercular deposit and ulceration, particularly towards the termination of the ilium and the ileo-cæcal valve. The mesenteric glands were also much diseased, enlarged, hardened, and, in some parts, contained cheesy matter.

This case presented, with remarkable distinctness, all the ordinary symptoms and physical signs of pneumo-thorax; yet was the patient able to lie upon either side, or upon his back, to sit up in the ward, and, on one occasion, to go down stairs; and though the side was at first obviously enlarged, it gradually assumed its natural size. It is also to be observed, that the formation of the complaint was marked by none of that urgent distress supposed by Louis to be almost its peculiar characteristic. I made inquiries particularly in reference to this subject, but could obtain no information by which it could be ascertained on what day, or at what time, the gas first escaped into the pleura. The lung was greatly diseased; and the aperture was so large that the air could escape from, as well as enter, the pleura with facility. His rather sudden death was most probably connected with a rapid effusion of serum into the cavity.

[To be continued.]

CONTRIBUTIONS TO ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.
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[Continued from p. 451.]

Hermaphroditism: a Memoir read to the Royal Society of Edinburgh in 1827 *and* 1828.

Since we cannot doubt the existence of hermaphroditic structure; since it obviously occurs in man, and that hermaphrodites are neither deformed males nor deformed females, and that neither the doctrines of a *lusus naturæ*, nor any other doctrine with which I am acquainted, can explain to a rational mind these singular and mysterious appearances, there remains one legitimate subject of inquiry—the investigation of the cause. Some very eminent physiologists have imagined a solution of the causes of hermaphroditism to exist in the speculative views as to the original laws agreeable to which they imagine all animals to be formed or constructed. Hermaphroditism, they remark, occurs in many of the lower animals; and if it be true that man is forced by a law of nature to pass through all grades of formation, should the development of the generative organs, by any accidental cause, known or unknown, be arrested, these organs will remain necessarily at a stage of the development corresponding to some of the lower animals; and hence the origin of hermaphrodites. It is sufficiently singular that, generally, the persons who support this hypothesis maintain also the theoretical opinion, that the male and female organs are essentially the same, being but slightly modified, a theory which the society will remember was easily enough traced back to Galen, if not to Aristotle: its modern dress changes it but little. As I should dislike extremely being misunderstood in the criticism I am about to offer, and should feel sorry at misunderstanding or mistaking the sentiments of others, I shall examine in detail these opinions.

The writings of Caspar Bauhin, which were quoted at great length in the first part of my memoirs, leave no doubt on the mind that the following doctrines are essentially in all respects the same.

"By supposing the ovum, previous to impregnation, to have no distinction of sex, but to be so formed as to be equally fitted to become a male or female fœtus; and that it is the process of impregnation which marks the distinction, and conduces to produce either testicles or ovaria out of the same materials." These are the expressions of Sir E. Home, in his memoir on hermaphrodite structure, in the Philosophical Transactions.

Notwithstanding the high antiquity of this opinion, and the support it has received from almost all modern anatomists, there cannot, I think, be a reasonable doubt entertained of its being fundamentally erroneous. So long as the ducts of Malpighi were undetermined, so long as *they could not even be named*, their exact nature might be, and was disputed. Supposed by some to be analogous to the uterine tubes in the kangaroo; denominated, even a few years ago, utero-vaginal tubes, in the first zoological school in the world*; so long the doctrine of analogies and similar organs might maintain a position in science: but it has been shown that these are male organs; that though present in females, exercising all their functions as such, they are essentially, and in all respects, *male organs;* that they cannot be the same as the fallopian tubes, since they are found *co-existent* with these tubes. We cannot surely say of two organs, which can be shown as separate and distinct, that they are essentially the same, and are formed out of the same materials. In the hermaphrodite case submitted to the society, the testes were of the natural size, the vasa deferentia perfect; the animal alternately showed the propensities of male and female, and was obviously capable of acting efficiently as male; but there was present, besides these organs, a perfect vagina and uterus, with slight remains of the fallopian tubes, and perhaps ovaria, though I do not insist on this. It cannot be said, surely, after this, that there is but one kind of organs, out of which the male and female organs are formed; for if reason mean any thing, it assuredly warrants us in denying that, out of exactly the same

* This observation I make whilst revising my original memoir.

materials, two organs essentially distinct can be formed.

(Sixteen years have now elapsed since these remarks were written and submitted to the Royal Society here; and although the ducts of Malpighi were demonstrated by me to be simply the rudimentary *vasa deferentia* of the male, *persisting in the female*, I still find that anatomists prefer theoretical views in preference to what is as plain a demonstration as any in Euclid. These tubes, as a last resource, have been called the "ducts of the corpora wolfiana" by the compiler of the catalogue of the museum of the London College. To such a view as this there are many heavy objections, the weightiest of all being that these tubes have been distinctly traced to the *testes* in an animal showing all the propensities of male and female (1843).

Perhaps it may be said that we cannot reason about the unnatural or hermaphrodital appearances, because there may be extraordinary deviations from nature's laws. I do not myself perceive the force of this: I observe an animal to become more and more equivocal in its generative organs, as both kinds are found to persist in it in a more and more perfect condition; when the appearances of hermaphroditism are few and unimportant, the effects upon the œconomy are insignificant; if extensive, they convert the animal into a new being. The reason for all this seems to depend on this great law in the construction of the genital organs: the embryo is at first hermaphrodital, both sets of organs are present: if the cause determinative of sex should act in an efficient manner, one set of organs nearly disappears, and the fœtus becomes male or female; but if not, nature adheres to her original type, and both kinds of organs remain: "the type of the generative organs even in the highest orders of animals is hermaphroditical."

Before I proceed to bring forward the proofs (in so far as my time permits me to do) of this theory, it seems right that I should notice the opinions of others.

In a very recent work on philosophical anatomy, the male and female genital organs are considered as simple modifications of one type: the uterus represents the prostate and seminal vesicles by its position, form, and functions; and yet in the free-martin described by Mr. Hunter, and in the human hermaphrodite of M. Petit, of Nemur, the seminal vesicles and uterus coexisted.

M. Meckel supports the doctrine that all embryos are of the same sex at their origin; and he states the analogies to be—

Testes . . .	Ovaria.
Fallopian tubes . .	Vasa deferen.
Vesic. semin. and prostate	Uterus.
Penis . . .	Clitoris.
Vagina and nymphæ .	Penis & ureth.
"qui sont restées en dedans, au lieu de faire saillie au dehors."	
Greater labia . .	Scrotum.
Mammæ . . .	Mammæ.

But it is not the German school alone which supports these ideas of the ancients, which have adopted them as their own, unfolding, as they have imagined, the rather vaguely expressed notions of the older anatomists, though this pretended vagueness may be merely supposition, and not supported by an appeal to the writings of Galen, of Fallopius, or Caspar Bauhin; theories altogether similar are maintained by very exact anatomists of other countries. The Bullétin des Sciences for 1815, p. 155, contains an exposé of the views of M. de Blainville. According to this gentleman, the organs of generation are originally of the same nature in every degree of the organization, composed of the same parts, and this nature is evidently female; the male sex being simply a modification of it.

It is supposed, also, that in the animals called actinomorphes there is no male.

In certain mollusca one side is male, the other female.

This kind of hermaphroditism is supposed to exist in fishes, and to be efficient.

But again, it is said that animals are born neuter (Les animaux sont produits avec le même disposition d'organes de la génération.) "Ils sont pour ainsi dire neutres, et ce n'est que par la suite que de circonstances qui nous sont entièrement inconnues font rester l'individu femelle, ou le font passer à l'état de mâle."

All doubts as to the author's meaning in the passages cited (if any doubt could be entertained) are removed by what follows.

"The ovary in the female is represented by the testis in the male." M. de Blainville next compares the scrotum to the nymphæ, the fallopian tube to the vasa deferens; the epididymis and seminal tubes are represented by the broad ligaments of the female. This, also, is Rosenmuller's opinion, whose works, however, I have been unable as yet to procure, so that I cite the name of this exact and distinguished anatomist on the authority of others: the seminal vesicles are compared by M. de Blainville to the uterus, and the clitoris to the penis. These opinions are, as we have already shewn, nearly 2000 years old.

Theories such as I have now cited are at variance, as it seems to me, with all well-observed facts: if both kinds of organs are found to coexist in the same individual, they cannot be formed precisely out of the same materials.

M. Meckel distinctly claims to himself the having first demonstrated ("démontrée d'abord, par mes propres recherches,") the idea that the organic deviations consist in a stationary condition of the development, rendered fixed at a degree of formation anteriorly normal or regular. He allows that it was suspected by Harvey, and afterwards by Wolfe and Autenrieth, and finally adopted by Reil, Tiedemann, Chaussier, Beclard, Blumenbach, Blainville, Heusinger, and Leuchardt. But it seems to me impossible to explain, on these principles, why an organ should run from a more complex to a more simple type; and the calling that a non-development of any organ which actually consists in the persistence of a more complex structure than what was contemplated by nature, seems to me an inconsistency in terms. Why should the type of almost all the organs be so complex in the lower animals, and of many of them so seemingly simple in man? and why should the elements of these complex types and organs be visible in man in the fœtal state, and their traces discoverable in the adult? It is because there is one type for all, and all animals were contemplated as coming within the range of this type.

The 143d section, page 598, of M. Meckel's work on Comparative Anatomy, has satisfied me that he has no clear ideas of the cause of hermaphroditism. Again, at Sect. 142, we find the following remarks:—cases of hermaphroditism may be reduced to an original absence of sexual difference, to the analogy which exists between the male and female organs. Finally, they may consist in a re-union of the characters of both sexes, in the same individual. Such, he says, is his opinion, and such also, he says, is the opinion of Ackermann, Buzdach, Stiglehmen, Seillan; but so far as I have understood Stiglehman, this is not his opinion, and it will be easy, if necessary, to quote passages from Stiglehman's works in which he arrives, in as far as I may judge, to nearly the same conclusions that I have myself drawn; but as his work is full of strange contradictory passages, and, at the same time, deeply tinged with a philosophy, or rather, I should say, system of metaphysics which, to me, and, I believe, to most persons in this country, is quite mystical and positively unintelligible, I shall not particularly insist on this point; at the same time, it must be admitted that this passage, summing up, as it were, M. Meckel's opinions, is sufficiently obscure.

"The masculine sex is a degree of development more elevated than the female. (Page 541).

"All the embryos of the superior animals are, in fact, formed after the same type, which is the type of the female. Even when the sexual difference is already developed, the male fœtus offers still analogy with the female; it consists in the position of the testes, which have not yet quitted the abdomen, and of that of the orifice of the urethra still situated upon the lower surface of the penis."

Now, if these passages be compared with what M. Meckel has said formerly, they will be found to be completely at variance. "We must not forget," he continues, "that the character proper to the species develops itself betimes."

But let us admit that the first rudiments of the species the most different are essentially the same.

At page 530, he speaks of the absence of all sexual difference which takes place primitively in all the superior animals.

M. Meckel further says that the principle of the reduction of the hermaphroditic formations to the regular type, is founded on the "communauté" of a fundamental type between the generative type of the two sexes, that is to say, on the absence and the de-

ficiency of the primitive difference. Hence it results that the anomalous dispositions of the superior animals are regular in the more imperfect organisms." But it seems to me exceedingly difficult to understand how he should ascribe to a primitive deficiency the absolute presence of two sets of organs in the same individual. An absence of primitive differences is far too vague a term even for physiology.

"I have already said, page 678, that the genital organs of the two sexes are primitively constructed upon the same plan, that they are to be considered only as modifications of the same fundamental type. In fact, it is easy to demonstrate that all the parts which by this re-union constitute this apparatus exist equally in both sexes where they differ only in relation to their volume, structure, and situation; all embryos are of the same sex in the beginning; the testes correspond perfectly to the ovary with a reference to configuration, functions, vessels, and nerves."

"The fallopian tubes are evidently analogous to the vasa deferentia. It is probable that in the beginning they communicate with the ovaries by straight tubes, and by a sort of epididymis like what exists in man. The seminal vesicles and prostate correspond undoubtedly to the matrix, only the matrix is larger, and more completely developed."

"The penis and the clitoris resemble each other. This analogy requires to include the vagina and the nymphæ."

"The greater labia represent the two halves of the scrotum.

"Until the sixth week, there is no trace of genital organs; at the moment of their appearance they are formed absolutely of the same type in all embryos; their form, their volume, their situation, are the same (p. 654), and consequently there is no distinction of sex.

"The internal genital parts are composed of two considerably elongated straight parts, oblique from without inwards, and from above downwards. These are situated high up out of the pelvis, and become afterwards either testes or ovaria."

"Secondly, two canals almost as broad as the parts we have just spoken of, but which are longer and thicker, extend beyond them upwards, and descend on their outer side; they produce either the fallopian tube or the epididymis and vasa deferentia; and they unite external to the pelvis, in a common median duct, which becomes either the womb and vagina, or the prostate gland, seminal vesicle, and posterior part of the urethra. Thirdly, of a considerable body, triangular, somewhat swollen at its anterior extremity, formed of two halves separated by a furrow proceeding along the lower surface, and becoming ultimately clitoris or penis.

"The folds found on each side become ultimately either the scrotum or greater labia.

"This original identity of the genital organs in all individuals was perceived by Home, Autenreith, and Akermann."*

The original type of the generative organ in all animals seems to me hermaphrodite; but neither did she intend that the adult animal should grow up so in all species of living beings. In the vegetable kingdom, perhaps, we have a hermaphrodite perfect in all

* Notwithstanding the dogmatic manner in which these remarks are made, as to the strict anatomy of the embryo organs, there is every reason for believing them generally incorrect. I have not myself been able to make out, in a way altogether satisfactory, both sets of organs in the male fœtus; and although the gubernacula obviously are the round ligaments, and consequently, then, that at an earlier period the elements of the uterus may also have existed, I cannot say that as yet I have been able to determine this satisfactorily. In the examination of the female fœtus, it is easy to see the remains of the testes; this structure, which I think must have been seen by most anatomists, was probably first described by Rosenmuller; its nature was altogether mysterious to me until the period of these late observations. M. Meckel's remarks on this structure are as follows: "Between the fallopian tubes and the ovaria in a fold of the peritoneum there are found, not only in the embryo and fœtus, but even a short time after birth, vessels extremely remarkable, which since they can neither be injected from the ovary nor fallopian tube, so that one cannot yet consider them as establishing a communication between the cavity of the tube and the substance of the ovary, resemble exceedingly the vasa deferentia of man with regard to number, situation, and form, that one might see in them a tendency to the formation of these canals and of the epydidymis."

But the form which the abdominal extremity of the tube affects in the origin, allows of this very probable conjecture, that these vessels are the means of communication, at first, between the fallopian tubes and the ovary; but that this communication becomes effaced, probably at the time when the abdominal extremity of the fallopian tube opens, and when there forms consequently a new road or passing.

These appearances, I repeat, I have frequently seen; and feel assured that the peculiar vessels, or appearances of vessels, are simply the remains of the male testes, epididymis, and vasa deferentia, in the female embryo.

respects, and the production of an individual without the concurrence of two; for wise purposes, without doubt, nature has disjoined the sexes in some, uniting them in others; but the original impress, the preconceived plan, cannot be mistaken, and when she deviates from ordinary structure, the return is always to the original type. To me, then, it appears, that in the construction of animal bodies, an original type has been contemplated in the forming each great system of organs, and that she has not proceeded from the more simple to the more complex, adding structures as they might be required, nor yet has she selected any particular animal as a model for all the rest. The doctrines of "formations arrêtéee," and the superaddition of parts and systems of organs as animals ascend in the scale of being, has no foundation in truth, or at least must be included in a broader generalization. It may be, perhaps, pushing a metaphysical abstraction too far, to assert, that in forming any organ, or series of organs in any animal, all the complex elements which the same organ may present in other animals are also present in the more simple, but still I believe this to be the case. Though the human cranium be in the adult state composed but of eight bones, it is essentially constructed out of a series of bones as numerous as those of the cranium of the crocodile, or fish; nor could this have ever been imagined by any one *à priori;* the proofs have flowed from direct inquiry into structure. The bones of the human shoulder, which seem so simple in their adult state, may yet be proved to be very complex when young, and to possess all the elements, all the original germs or centres of ossification, which ultimately as separate bones are found to compose the shoulder of the echidna. I do not mean to say that the skeletons of these animals were the original type laid down by nature in the execution of her great plan, but without doubt the type of the skeleton of all the vertebral kingdom is not so simple as in man, but extremely complex.

If we apply these views to other organs, we still find support from their arrangement. Two objects seem to have been contemplated in the construction of animal bodies; the performance of function, as regards individualism, and the providing for or contemplating all possible existing forms of animal bodies. The number of component elementary parts, then, are the same in all the organs, and this accords better with those ideas which naturally flow from a close observation of nature's plan; viz. that the mind which contemplated, and the idea which fashioned the living animal kingdom, foresaw all things, all possible combination of forms, and whilst the species of animals were determined by fixed laws, thus giving to each kind its own special secondary type, one great elementary structure was made to pervade all. Whilst the supporters of the doctrine of analogous organs and "formations arretée," are attempting to shew the analogy between the component parts of the lungs and of the gills, fancying them to be the same organs because their functions are similar; the similitude, nay identity, of the osseous branchial apparatus with the ribs, or with the pulmonary tubes of the animals which breathe by lungs, meeting insurmountable objections and obstacles to their theories, and forced to alter and amend their views daily, as new facts are discovered; whilst they cannot even name the bones termed branchial arches, calling them sometimes ribs, though they must know that fishes have ribs in their proper place and usual situation, and sometimes os hyoides, being uncertain as to their real nature; whilst they are unable to determine the nature of the so-named swimming bladder, and fancy it to be some how or other connected with the ear; a single phrase seems to me to solve these questions; the lungs and gills are not the same; they are not formed of the same materials; the type of the respiratory organs in all vertebral animals is at once pulmonary and branchial. Nature foreseeing that certain vertebral animals would live well by lungs, others by gills, and that some would require both, gave a type to meet all; that type is complex: all animals originally possess both gills and lungs*.

If proofs were wanting in support of

* (1843.) This bold hypothesis was thrown out by me in 1827, as may be seen by the text. At that period the dissections of Rathke, which proved my theory to be the correct one, were unknown in this country. My own views were, I admit, derived principally from theory, but that theory has since been proved to be the real and only admissible one.

this view, I might instance the hyoid bones and ribs being present and co-existing in so many animals; the anatomy of the proteus, which possesses both organs, and seems to use them both alternately; of the syren, and azolotl; the growth and œconomy of the tadpole, and of all reptiles; the presence of both organs in fishes, though they are not both required; the air cells in the abdomen of the diodon; and lastly the presence of gills in the chick at an early period of its incubation, which I have not myself seen, but which is here brought forward on the authority of Baer, and of other anatomists of the German school.

An original type seems, then, to have been contemplated for each organ or assemblage of organs; that type generally, so far as I have yet been able to observe, is extremely complex, and embraces within its range all possible structures: no particular animal has been selected as offering within its structure the types of all the organs, the œconomy of some low in the scale being very complex as to certain organs, and *vice versâ*.

But wherever the type may be found, we shall generally find the rudiments or elements in other animals, indicating that these organs, simple in their appearance, were yet originally contemplated on a complex plan: who, for example, looking at the adult scapula of one of the higher mammalia, could believe that it was really composed of so many different elements capable of assuming a degree of importance as distinct portions or bones, wherever the peculiar œconomy of the animal, whether higher or lower in the scale, required this arrangement to take place? But if this happens with parts of so gross materials as the bones, if their structure should require such careful observation, it cannot reasonably be expected that the same degree of nicety in research and proof by demonstration should be made out in regard to organs formed of soft and rapidly absorbed materials. The size of the thymus, or of the supra-renal capsules in the fœtus, could not be anticipated by an inspection of these parts in the adult: the total disappearance then of the original elements of organs at an early period of fœtal life cannot be deemed extraordinary. To some it might appear a confirmation of these doctrines, that Stegheler seems to conclude, in his work on hermaphrodites, that the type of all animals is hermaphrodite; but though I have given some considerable attention to his work, I cannot discover his precise meaning, nor the means by which he arrived at this conclusion, if it really be his opinion. He has thought fit, after the manner of his school, to go back to the origin of all things, to the microcosm and macrocosm; to the *omnia in omnibus*; and the nidus for mativus, &c.: there seems no occasion for all this. I ask a plain question. What is the use of certain organs and parts found in the human body and the bodies of animals? and I am told that nature had erred by excess, says one; by defect, says another; it is a mere lusus, says a third; it is normal; it is the perfection of all things. Of what importance, or utility, can it be to any one to be told that, utroque factore ingenerationis actu ad indifferentiam erecto per formationem embryonis nova oppositio oritur; and yet after all, notwithstanding this neutralization, the product is a being in whom the chances are as a thousand to one that one or other sex predominates.

I have often thought that certain organs found in the mammalia, with whose functions we are not acquainted, and which seem to have a reference neither to the adult nor fœtal condition, nor essential to individual life in any known animal, may be the remains of the organs required by that portion of the animal kingdom which has ceased to exist. In the composition of the skeleton of the antediluvian Sauria, unusual combinations of structure are obvious; arrangements and forms of bone, with dimen sion and shapes, not only not familiar to us, but evidently of a nature differing widely from the present animal kingdom. It will be looked on, I fear, as too bold a flight of the imagination to conjecture that the plan of the present creation was included in the former; that the unexplained organs in animal bodies, and which are in us rudimentary, and so far as we know useless, were once developed, and formed, perhaps, important organs, in a race of animals which ceased at a time when the earth's surface became unfitted for their support.

ISCHURIA RENALIS.

To the Editor of the Medical Gazette.

Sir,

I inclose a communication read to the Physical Society of Guy's Hospital, on the subject of ischuria; thinking that the case described presents some points of interest, and may not be unsuitable for the pages of your valuable journal.

I am, sir,
Your obedient servant,
Theophilus Thompson, M.D.
Physician to the Northern Dispensary, &c.
3, Bedford Square,
Dec. 30, 1843.

There is perhaps no secretion the suppression of which so rapidly induces formidable symptoms as that of the kidneys; and, happily, the occurrence of complete anuria is not frequent. Morgagni had no opportunity of inspecting a single victim to this malady. Sir Gilbert Blane, notwithstanding the great extent of his practice, according to the statement made in his "Treatise on the Prevalence and Mortality of particular Diseases," saw only two examples of the complaint; and the recorded instances are still few and incomplete. Although renal affections have of late been studied with increased attention, there remains much mystery in the relation between the urinary secretion and various functions of the body. In cases of anuria, independently of variations attributable to the degree of rapidity with which the poison of urea may enter the system, there are differences in the effects produced by its introduction, perhaps referable to the variety of individual susceptibility to its influence; and in the present state of our knowledge, it is unquestionably desirable to record every case, the details of which may tend in any measure to illustrate the phenomena of such affections.

An unmarried lady of energetic habits, aged 45, who had for five years suffered in the region of the colon from frequent and severe attacks of pain (which, from the coincidence of tenderness with flatulent eructation on pressing near the sides of the lumbar vertebræ, I was inclined to attribute to a blow formerly sustained on the back), six months after the cessation of the catamenia had a feverish attack, attended with shivering and pain, and followed by a red eruption, diffused over the body in isolated patches, but regarding the nature of which her medical attendant would not hazard a decided opinion. A few days after the disappearance of the eruption (Jan. 22, 1840), Dr. Daniell, of Bath, who was consulted, found both tonsils inflamed, and one of them ulcerated. There was occasional sickness, but no pain or tenderness of loins. Prussic acid was administered in the "mistura cardiaca" of the Bath Hospital; and the alvine evacuations being offensive, alterative doses of mercury and mild laxatives were also administered.

The sickness continued, and on the 28th of January, the urinary secretion, previously undisturbed, was found to be suspended, so that only half a drachm was obtained on the introduction of the catheter. Nine ounces of blood were removed from the loins by cupping, and small doses of tincture of cantharides administered. In the evening two drachms of turbid urine were passed.

On the 31st, after a few doses of creasote, the bowels were slightly relaxed. The sickness, which had been for a time interrupted, soon returned. The matter vomited was at first sour, and mixed with mucus; subsequently free from smell, and of a greenish hue. Cupping in the lumbar region was now repeated, and eight ounces of blood withdrawn.

When I was summoned from town to see the patient, on the 1st of February, she had passed no urine since the 28th of January, and she suffered from retching, which occurred spontaneously at intervals of about an hour, but could also be produced at any time by compressing the abdomen or loins. The conjunctivæ and cheeks were slightly yellowish; there was some redness and enlargement of the right tonsil; swelling over the jaw, partly glandular, partly œdematous; and slight tenderness in the abdomen and right side of the loins. The pulse 80, rather sharp. The patient's manner was perfectly calm and collected, and I could not ascertain that the brain was in any degree affected, excepting that she mentioned, in answer to particular inquiries, that her sight was rather indistinct, and that she had several times imagined figures before her. We prescribed a spermaceti draught, containing a drop

of Scheele's prussic acid, every three hours, and a bran poultice to the abdomen.

The next day, February 2d, the sickness had nearly ceased; the evacuations were less frequent, and contained less mucus. We advised the use of a warm bath, the repetition of prussic acid, and the application of two blisters to the loins. The skin became moist after the bath. One of the blisters was dressed with veratria ointment, in the proportion of a grain to three drachms of lard; but a burning sensation resulted, so distressing as to render it expedient to substitute an ointment of acetate of morphia. This application, although in the first instance followed by an increased sensation of burning, soon afforded material relief. At 8 P.M., after complaining a little of giddiness, the patient passed three drachms of turbid slightly alkaline urine, of sp. gr. 1·019.

Feb. 3d.—She was collected and cheerful, had slept a little in the night, but had vomited once. Two healthy evacuations had been produced by a linseed enema, but no urine had passed. There was some deep-seated uneasiness in the left hypochondrium, increased by coughing. Prussic acid in saline mixture was continued, and a bran poultice applied to the abdomen.

Having ascertained that an issue in the loins, which had been kept open for nearly two years, had healed during the feverish attack, and thinking it not improbable that this circumstance might have exerted an influence on the state of the kidneys, we directed the free application of nitrate of silver, with a view to restore the issue. In the evening a drachm of turbid urine was discharged.

4th.—During the night three successful attempts were made to pass urine, of which three ounces and a half were discharged, turbid and fœtid. The appetite was keen; face less swollen.

On returning to London I left the patient in the care of Dr. Daniell, who favoured me with occasional reports, of which I now avail myself.

6th.—Five ounces of urine passed yesterday, and three during the night: it was of brown colour, and highly offensive, but its specific gravity only 1·014; and my friend Dr. Rees, who obligingly examined a portion which I sent him, found it to contain only the average quantity of urea. There was some giddiness and heat of head, apparently increased by the warm bath; but the tongue was clean, skin moist, œdema of face much diminished, and there was no return of vomiting. The head was shaved, and decoction of wintergreen substituted for saline medicine.

7th.—After the hip-bath complained of a "binding and shooting" pain in the region of the bladder, which was relieved by poppy fomentation. Ten ounces of bloody urine passed during the night: this secretion continued mixed with blood till February 9th. The average daily quantity was ten ounces, and the specific gravity 1·013, till February 12th, when it ceased to be fœtid. At this period the œdema of face had entirely disappeared. The quantity of urine gradually increased, and at the end of the month averaged two pints in twenty-four hours. On the 8th of March its albuminous character disappeared, but the specific gravity continued low. The patient gained strength and proceeded favourably till the 11th of March, when she was attacked with the prevailing epidemic influenza, which occasioned soreness and irritation of the mouth and windpipe, cough, heat, restlessness, furred tongue, and occasional vomiting. The expectoration, for two days inconsiderable and mixed with blood, subsequently became copious, mucous, and of a chocolate colour. On the 15th of March the expectoration was diminished, and the tongue moist, but the strength was reduced, and the urine contained blood. On the 17th the patient's manner became restless, her respiration much hurried, skin hot, and tongue parched and furred, but her intellect remained clear. Various measures were adopted, but in vain; effusion was obviously advancing in the chest. At 4 P.M. the pulse was scarcely perceptible, and she sank soon afterwards, not speaking, but remaining sensible to the last.

On an inspection, which was obtained three days after death, some effusion was found in the right pleura. The middle lobe of the right lung was hepatised. The lower lobe of the left lung not hepatised, but tubercular, and extensively attached to the chest by firm adhesions. The heart flaccid and soft, but otherwise natural. The left

kidney was small and flaccid, but its pelvis considerably dilated. The right kidney enlarged. In other respects these organs presented no very obvious change, excepting that Dr. Daniell thought he could detect a slight degree of mottling. The rectum was not distended, and the colon was free from obstruction. The head and spine were not examined.

Remarks.—The case now recorded is an unusual example of complete interruption of the renal secretion, unattended with the urgent symptoms which protracted anuria usually induces.

In a considerable proportion of instances, as in those described by Sir H. Halford, (Essays and Orations) Mr. C. J. Hall,* and others, death has occurred within three days from the commencement of the suppression; and Dr. Prout considers five days the limit within which coma is almost invariably established. Nearly all cases of ischuria renalis said to be longer protracted, are probably either referable to deception, or associated with calculous deposit, as instanced by Dr. Clarke†, or dependent on some peculiarity of anatomical structure, as in the case described by Dr. Richardson (Philos. Trans. 1713).

In the present example no urine was secreted for the space of about 120 hours. During the subsequent 48 hours, only half an ounce was passed, and the natural quantity was not restored till after the expiration of a month from the period of its interruption; nevertheless no urgent cerebral symptoms at any time occurred. It may, indeed, be alleged that, in some such cases, according to the statements of Nysten,‡ Valisneri, and others, the fluid vomited or otherwise excreted has contained urea and uric acid, and we can conceive that the overcharge of the blood with urea might thus in some degree be obviated, but in the present example no urinous odour was detected in the matters discharged, and as a general rule, in cases of ischuria, it does not appear that vomiting and diarrhœa have averted or retarded the occurrence of coma. Indeed, we have no conclusive evidence of the transference of the urinary secretion. The cases adduced by Marangoni,* Nysten, and others, in support of such a doctrine, are unsatisfactory in the extreme.

A circumstance in the present narrative to which I am inclined to attach some importance is, the decided amendment which followed the application of nitrate of silver. My impression regarding the power of this remedy is not indeed derived simply from this solitary instance, but is confirmed by the observation of its efficacy in some analogous cases; in one of which recovery followed its adoption, notwithstanding the existence of decided coma. The final result of this patient's illness, succeeding apparent convalescence, corresponds with a doctrine derived from recent observations, namely, that individuals who have been affected to any extent with disease inducing albuminous urine, are peculiarly susceptible to the influence of epidemics, and are less capable of encountering such incidental disorder.

Irrespective of this contingency, the present case is not discouraging. It confirms my opinion of the appropriateness and efficacy of cupping, issues, and the warm bath, without, however, lessening my distrust of internal medicines, such being excepted as, by their soothing effect on the intestinal mucous membrane, may tend to support the general strength, and may thus by sympathy influence the kidneys.

In acute attacks of ischuria, depending on inflammation of both kidneys, bleeding may be very efficacious. In more chronic cases, unassociated with feverish action, issues may be essentially useful. In all instances the warm bath and demulcents are appropriate, but there may doubtless remain conditions in which the resources of medicine will prove unavailing, and we may still adopt the words of Heberden in reference to this disorder. "Non est dissimulandum, licet pauci quidem his auxiliis visi fuerint servari, alios tamen iis omnibus frustrâ usos esse."

3, Bedford Square,
Dec. 30, 1843.

* Medical Gazette, April 1840.
† Ed. Med. and Surg. Journ. vol. xix. Vanderwiel, Observ. Med. Rar. Obs. 51.
‡ Recherches de la Physiologie, &c.

* Mémoires de l'Academie des Sciences, 1715.

CASES OF PARALYSIS.

To the Editor of the Medical Gazette.

Sir,

If you think the following cases of sufficient interest, you will oblige me by inserting them in your journal.

I am, sir,
Your obedient servant,
D. Detzerdt Hovell.

Five Houses, Clapton,
Dec. 18, 1843.

Case of Paraplegia, treated successfully by tonics and galvanism.

In the spring of 1840, C. J., of lymphatic temperament, and not of a very robust constitution, was attacked with ptosis and amaurosis of the right eye, for which he applied successively to three medical men, all of whom gave him mercury, rather freely, but without producing salivation. After this treatment had been pursued some months the ptosis was relieved, but the eye became amaurotic. He became affected with carbuncle, and his general health began to give way.

In March, 1841, I was requested to see him, for the purpose of drawing off his water, and found him in bed, suffering from paraplegia with retention of urine and incontinence of fæces; the paralysis was complete, sensation and motion being extinct below the the second or third dorsal vertebra. This state had existed six weeks, and in addition to other evils a false passage had been made in attempts to pass the catheter. He had a large moxa on the loins, and a sloughing sore on each trochanter; he was much emaciated and depressed in spirits as well as constitutional power; thought recovery was hopeless, and looked forward to death as the only relief to his miserable condition.

Having cheered his spirits by assuring him that recovery was not impossible, I proceeded to improve his health by generous diet, and by giving internally quinine and iron combined with dilute sulphuric acid; as his nights were sleepless, a third of a grain of morphia was given every evening at bed-time. A hydrostatic bed was procured, which, in addition to rendering him more comfortable, prevented further extension of the sloughing. In the course of the next month he had much improved in condition and strength, and the effect of strychnia was next tried, but without benefit. At this time the only sign of vitality in the legs was occasional involuntary convulsive twitching of the muscles. Galvanism appeared to promise the best chance of restoring the use of the limbs, and I accordingly began to apply it by means of an electro-magnetic apparatus daily, or as nearly so as was practicable. The parts selected for the application of the poles of the battery were the hollow spaces behind the internal malleoli over the posterior tibial nerves. The first few days no effect was produced, but one morning he told me with great glee he could move his great toe; he soon after acquired the power of moving all the toes, then of flexing and extending the foot, and so on till he could move the whole limb. The motive power was not sufficient at first to overcome the weight of the limb as it lay on the bed, but when it was raised by the hand he could flex the leg and thigh, and extend them again. By this time the control of the bladder and rectum was in some degree restored also, and I next passed the electric current more directly through the parts by attaching one pole to the end of a catheter introduced into the bladder, and the other over the sacrum. In one respect the effect of galvanism was very striking: before its use the muscles of the leg were thin, wasted, and flabby; they now became considerably enlarged, firm, and even hard. During its immediate influence constant and strong muscular contraction took place. It had now been applied more than seventy times, and on an average about three quarters of an hour each time, and the patient had gradually recovered sufficient power to be able to walk a step or two, when supported by a person on each side.

About this time, four months from the commencement of my attendance, circumstances occurred to put a stop to our proceedings, and as he shortly after went into the country, the treatment was not resumed. At the present time he is able to walk a mile with the assistance of a stick only, and says with rest he could walk two; his health is much better than it was for years previous to his illness. The control of the bladder and rectum is not perfectly restored, but he is able to go to church, and to visit

his friends, without fear of accidents. He is able to ride on his pony: this he does frequently. I should mention that six years before the occurrence of paraplegia, and six months after his marriage, he had an attack of hemiplegia, from which he recovered perfectly.

Case of paralysis of the right inferior extremity from injury to the back—Recovery.

John Dehalsted, a fine young man, æt. 21, was admitted an in-patient of the London Hospital, under the care of Mr. Scott, on the evening of the 31st of January, 1838, in consequence of having fallen from a height of fourteen feet into the hold of a vessel, and struck his head against a bar of iron: he complained of soreness over the left temporal muscle, where there were some marks of severe contusion, also of great pain in the back, especially over the seventh cervical and three superior dorsal vertebræ; percussion in the course of the spine did not occasion pain in any particular spot. He felt also considerable numbness in the right lower extremity; sensation remained in the limb, but all power of motion was lost. He passed a restless night, and complained the next morning of great pain in the lower part of the chest, shooting, as he expressed it, to his back; there was some degree of fever, with hot skin, &c.; the pulse was slow, small, and laboured; he was bled to sixteen ounces, forty leeches were applied to the spine, and saline antimonial medicine prescribed; he had also retention of urine, which was drawn off by catheter.

9 A.M.—He has moved the right leg partially, but involuntarily, not having yet any voluntary power: on tickling the sole of the foot, the whole limb is spasmodically contracted, clearly illustrating the excito-motory action, independent of volition. The next day he passed a little water, and the fever had somewhat abated. Ordered—

Hyd. Chlorid. grs. ij.; Pulv. Ipecac. Comp. grs. ij 4ta. quaq. hôra.

Feb. 3.—More leeches were applied to the spine; he continues to pass urine; the contraction of the muscles on tickling the foot has in a great measure subsided, but the paralysis still continues. To continue the calomel. An abscess had formed over the left temporal muscle, where there had been some contusion. Mr. Scott made an incision with a scalpel, and evacuated pus mixed with coagulated blood and serum.

Feb. 6th.—Is much better; the mouth is slightly affected: to discontinue mercury.

On the evening of the 8th he became delirious, and so violent that he could with difficulty be kept in bed; his pulse was feeble, and his extremities cold. He took forty drops of laudanum in a glass of wine, but almost immediately rejected it from the stomach. Mr. Hamilton prescribed a grain of morphia every two hours till he should become quiet. After the fourth dose he fell into a profound sleep, which lasted till the middle of the next day; delirium returned slightly the next evening, and was again subdued by morphia. From this time he progressed steadily and satisfactorily, and was discharged on the 10th of April, having recovered the use of the paralysed limb, with the exception of the great toe. Subsequently he came to the hospital with volition and former power completely restored.

About the same time I admitted another young man into the hospital, under the care of Mr. Scott, who had fallen about seven feet from a ladder, and received a blow over the four or five superior dorsal vertebræ. He complained of pain in this situation, and on examining the chest I observed that the thorax remained passive and motionless during inspiration and expiration, from paralysis of the intercostal muscles; respiration being carried on principally by the diaphragm and abdominal muscles. No other paralysis was discovered. He was treated by general and local bleeding, and the exhibition of mercury. He recovered after a few days.

Paralysis in the first case appears to have depended on general debility, and an unhealthy, probably anæmic condition of the spinal cord, a state analogous, perhaps, to incipient ramollissement, and incompatible with the condition of the medulla—that of generating nervous influence. The repeated and continued exhibition of mercury for some months previously contributed in my opinion to bring on the disease. If we consider one effect attributed to

mercury, that of rapidly destroying red blood, this appears more than probable. The marked good effects of quinine and iron in this case may perhaps be allowed, in support of the theory of Liebig, that these, and other medicines of the same class, act by supplying some constituent or elementary principle that is deficient in the brain or spinal marrow, and at the same time necessary to its healthy and normal condition, and to the exercise of its function. The debilitated state of constitution depending on the "phosphatic diathesis" is readily to be accounted for by the loss to the system of some valuable constituents excreted in the urine, and the readiest, and indeed only method, of curing the disease, is by preventing the escape, or further, by artificially supplying the deficient principle.

Mercury, again, was, I have no doubt, instrumental in effecting recovery in the other two cases, and would appear to be generally indicated in paralysis from accident, where recovery is not spontaneous. In chronic cases of paraplegia, and other forms of paralysis, the diagnosis and treatment depending on it is more difficult. Dr. Farre has expressed his opinion, "that mercury is always indicated when paralysis occurs in persons who exhibit a tendency to inflammation of serous membranes, with deposition of lymph, and that in these cases its extensive use is required." Where there exists a debilitated state of constitution, with anæmia, and a congestive rather than a plethoric condition of vessels, galvanism and electro-stimulant medicines, together with tonics, promise most success.

It is fair to infer that the paralysis in the last two cases was caused by concussion of the medulla, at or near the origin of the nerves supplying the affected parts.

NERVES OF THE UTERUS.

To the Editor of the Medical Gazette.

SIR,

I HAVE been surprised to see the following paragraph in a note by Dr. Edward Rigby, respecting the nerves of the uterus, at page 21 of his recent edition of Dr. Hunter's Anatomical Description of the Gravid Uterus. "Indeed," Dr. Lee," he says, "appears to express a conscious doubt as to the nervous structure of these masses, for he does not describe them as *continuous* or identical, but as merely *coalescing* with the branches of the hypogastric or spermatic nerves." I trust your readers will do me the justice to compare this paragraph with the following extract from my lecture on the nerves of the uterus, published in the MEDICAL GAZETTE, on the 30th December, 1842, (Vol. xxxi. p. 469). "From the form, colour, general appearance, and vascularity of these plexuses on the body of the uterus, and the resemblance they bear to ganglionic plexuses of nerves, and from their branches actually *anastomosing* and coalescing with the spermatic, hypogastric, and sacral nerves, I was led to conclude, on first discovering them, that they were nervous ganglionic plexuses, and constituted the special nervous system of the uterus enlarged by pregnancy. This dissection was examined by many of the most eminent anatomists in London, and they all admitted that the great plexuses on the body of the uterus were *continuous* with the spermatic, hypogastric, and spinal nerves. In a paper read to the Royal Society (Dec. 12th, 1838), I described the appearances displayed in these dissections and drawings. It was referred by the Committee of Physiology to Professor Owen and Mr. Kiernan, and these distinguished anatomists decided, from an examination with the microscope of small portions of the plexuses under the peritoneum, which had long been immersed in rectified spirit, that they were bands of elastic tissue, and not plexuses of nerves. The evidence furnished by the actual *continuity* of the plexuses with the great sympathetic was considered of no weight compared with the microscopic appearances. The microscope was the only test."

It is scarcely necessary to state, that this decision with the microscope was reversed by the Council of the Royal Society, and is now universally admitted to have been erroneous. Mr. Owen now acknowledges, in the most unreserved manner, that the microscope is not a test.—I remain, sir,

Your obedient servant,

ROBERT LEE.

4, Saville Row, Jan. 4, 1844.

ESCAPE OF URINE AT THE UMBILICUS.

To the Editor of the Medical Gazette.

SIR,

THE irregular construction of parts or organs of the body which now and then present themselves, must invariably prove matter of interest to the physiological inquirer; and when the anomaly is extremely rare it becomes worthy of record, as adding another remarkable fact to the curiosities of medical experience. The narrative of the case which I proceed to communicate will occupy but a small space in your widely circulated journal. The obstetric reader cannot but regard it as a singular vagary in his especial province of nature's handiwork, whilst the comparative anatomist will trace in it the more ample development of a rudiment of organization, occurring, as it were by accident, to an individual of the human kind, but which, on the other hand, seems essential to the constitution of many animals whilst in utero.

A few weeks since, a poor woman named Curtis brought a female child to me for advice, aged 13 weeks. From the period of its birth the urine had escaped at the umbilicus, the urethra being at the same time perfect. The excretion passed through the natural channel, and probably simultaneously with its evacuation from the navel, as the flow of it from the latter situation was not continual, but occurred at intervals, as if it were regulated by the detrusive action of the bladder and muscles associated therewith. The general appearance of the umbilicus was larger and more open than usual, and in the centre of the cartilaginous nipple-like projection I found an orifice which admitted an ordinary-sized probe. This was easily passed in the direction of the linea alba towards the bladder. It was clear to me, from a consideration of all the circumstances, that the common ligamentous band which passes from the fundus of the bladder upwards to the umbilical cord, and known by the name of urachus, had assumed, and retained subsequently to birth, the form of a duct, and this duct opened into the bladder. In the calf, and other quadrupeds, a communication resembling that which I have described always exists; but, to use a quotation from that distinguished anatomist, M. H. Cloquet, "in man, it (the urachus) never forms a canal excepting in cases where the urethra is wanting."

I think it more than probable that during the intra-uterine life of this child a conformation of parts existed strictly identical with the allantois of other animals, and performing the same function, obscure as that function is generally admitted to be.

Previously to my seeing the case, pressure in a variety of ways had been resorted to without benefit. I recommended the mother of the child to take it to the County Infirmary, in order that the opening might be closed either by suture or other surgical means. It was treated by a simple suture, dressed with a pledget of lint, and secured by adhesive plaster.

The case was no longer under my inspection, but I understand the escape of urine was completely arrested for a fortnight, when it again found vent at the umbilicus.

A more effective union might be accomplished by means, I should say, of a small incision, the edges of which might be kept in apposition by suture, or plaster conjoined with suitable pressure.—I remain, sir,

Your obedient servant,

T. H. STARR, M.D.

Kettering, Northamptonshire,
Jan. 6, 1844.

OPIUM IN HERNIA.

To the Editor of the Medical Gazette.

SIR,

THE following is a case showing the good effects of opium in strangulated hernia.

I was sent for, at 10 P.M. on the 24th inst. to visit R. H. aged 45, a stout, muscular man, suffering under strangulated scrotal hernia in the right side. He had been trying for an hour to reduce it, having done so frequently before, but now he informed me it was a great deal larger. He was vomiting, and complained on the least pressure. In consequence of the extreme tenderness I did not persevere in the taxis, but decided on putting him under the influence of opium. I gave him two grains every fifteen minutes, until he had taken six grains, and to use hot

fomentations. Shortly after the first pill the vomiting ceased; and when I visited him again at half-past 12 P.M. I found them preparing to come and stop my visit, as he had got relief. I found him, as he said, exceedingly comfortable; it was quite evident he was enjoying all the luxury of an opium eater. Upon inquiry, he told me he had not touched the swelling, but that it had gone away of its own accord.

I am, sir,
Your obedient servant,
J. M. WALKER, M.R.C.S.L.

Newcastle-on-Tyne, Jan. 1, 1844.

MEDICAL GAZETTE.

Friday, January 12, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

SOME LATE TRIALS AT THE WINTER ASSIZES.

SOME time has now elapsed since we last directed the attention of our readers to the practical lessons in forensic medicine afforded by the trials which take place in our courts of law; and we, therefore, comment the more readily on three cases of the kind which occurred during the course of the last month.

CASE I.—At the Liverpool Assizes, on the 22d of December, Ann M'Cormick was indicted for murdering her infant, five weeks old, at Manchester, by administering arsenic to it. The case was, unfortunately, but too clear. The mother bought arsenic at a druggist's, and gave it to the child in its porridge. A woman, in whose care the infant was left, not knowing that the porridge was poisoned, gave it additional portions. This caused repeated vomiting; yet the next day the symptoms were so slight, that when the child was taken to the infirmary, nothing was prescribed for it.

The counsel for the prisoner does not appear to have touched upon this point, though something might have been made of it. Perhaps the omission is merely in the report, which was probably drawn up by a non-medical hand. It is deeply to be regretted that these medical trials, so interesting and so important, should seldom or never be reported by men understanding the points on which they turn. In the present instance, several things in the evidence require correction or elucidation; but we do not always know whether to attribute them to the witnesses, or to the reporter. Thus Mr. Holland, house-apothecary to the infirmary at Manchester, is made to say, that in fatal cases of poisoning by arsenic, "the first symptoms are unusually violent, so far as pain and vomiting are concerned."

The context shews that Mr. Holland did not say "unusually," but "usually." The symptoms are usually violent; and their slightness, therefore, masked the case at the infant's first visit to the infirmary.

Mr. John Davis, a lecturer on chemistry, found arsenic in the porridge, the vomited matter, and intestines, but not in the stomach or duodenum. "The bottle containing the brain, liver, lungs, and heart, were [was] saturated with arsenic." Here again must be a slip of the reporter; for though we might expect to find traces of arsenic in the viscera, any thing like saturation of the bottle would throw suspicion upon the case.

Mr. Davis says that he found arsenic by both the usual tests. It is not stated what these tests are;—perhaps the ammoniacal nitrate of silver, and the ammoniacal sulphate of copper; but the detection of arsenic in organic fluids by these re-agents would have required preliminary steps, of which no mention is made by the reporter. Was Marsh's test used?

We will not comment any farther upon this trial, which presents no remarkable features to the medical jurist, except to observe that the counsel for the prisoner was evidently acquainted with Orfila's discovery of the normal presence of arsenic in the human frame.

We are not quite sure that this discovery has been absolutely and unanimously accepted as a fact by medical jurists; but even if indisputably proved, it is not likely to cause much embarrassment in toxicological investigations; for the arsenic which is innate in human tissues gives the very faintest indications of its presence, while that which is criminally administered is commonly abundant.

We must not omit to mention, that the child lingered twelve days before it died. Ann M'Cormick was convicted, and sentenced to death.

Case II.—A general practitioner, and one Tomlinson, whose rank is not mentioned, were tried at Derby on the 22d of December, for administering medicine to Sarah Hand for the purpose of procuring abortion. In one count it was stated to be savine, in another "a certain noxious drug to the jurors unknown."

Mr. Willmore addressed the jury for the prosecution at considerable length; but as his speech has not been reported, we are left to conjecture the motive which could have urged the surgeon to the commission of such a crime. As for the man Tomlinson, Sarah Hand was with child by him.

No satisfactory proof was given or offered that savine or, indeed, that any injurious drug had been administered. The woman, Sarah Hand, who had already had a child by Tomlinson, appeared to have been actuated by jealousy at his conduct with another woman, and by anger at his not marrying herself. Besides her *liaison* with Tomlinson, other frailties were laid to her charge, which seem to have thrown additional discredit on her testimony.

Tomlinson asked the surgeon for some medicine for his sister, and received a mixture of aloes, jalap, Epsom salts, and water. Hand took this, or, if her evidence was correct, something stronger, as the symptoms were so violent that her life was in danger. Abortion did not take place.

The evidence of the woman, however, not being believed, the case fell to the ground. The acquittal of the surgeon was most triumphant. The jury, without troubling the learned counsel to call witnesses for the defence, turned round for a minute, and brought in their verdict of acquittal. This was followed by loud and successive plaudits in the court. Tomlinson, too, was acquitted, but not quite so exultingly. The jury deliberated for about ten minutes, and their verdict of "not guilty" was again followed by loud and repeated plaudits; but the foreman, at the same time, observed, "that they thought the prisoner had acted very wrongly, but did not feel satisfied that it was a noxious drug."

Almost the only toxicological point in this case is the effect of aloes in pregnancy. A medical witness observed that aloetic medicines were expressly prohibited in pregnancy, because of their injurious action upon the uterus at that time; but he added, that in his opinion, aloes taken in the quantity mentioned [it is not stated in the report] would not have done any injury, nor caused the symptoms of the case.

Denman, as our readers know, does not partake the general professional dread of aloes, remarking that "they are in common use among the lower class of people, because they are cheap, and conveniently given in the form of pills."

Case III.—At the same place, and on the same day, John Winfield Grocock, aged 17 years, was indicted for violating the person of Eliza Ann Allwood, a child aged 11, and also for attempting to murder her.

The outline of the case may be given in a few sentences. The prisoner having decoyed the girl away, under pretence of giving her employment in a Derby silk mill, violated her person, struck her repeatedly on the head with a hammer, and left her for dead. He then gave himself up to justice as a murderer, asked for pen, ink, and paper, and wrote a minute account of the whole affair, with the exception of the rape, which he naturally supposed would diminish his claims to public sympathy, without adding to his pretensions as a monomaniac. His account concludes by saying, "as regards my intention for committing such an act, I was determined to be transported or hung, having at that time no means of obtaining a livelihood, but I cannot properly explain the motive for committing such an action."

The prisoner described to the superintendent of police the spot where the crime had been committed. It was under a tree facing the windows of the mill at Borrowash. The grass was much trampled down; there was a quantity of blood upon it; and the handle and head of a hammer were picked up separately, for Grocock had struck this poor child till the instrument came in two. When taken to the Infirmary, one large and six smaller contused and jagged wounds were found upon her head. She recovered, however, and was one of the witnesses on the trial.

Grocock had possibly speculated on the favour shown of late to monomania, whether real or pretended, and had anticipated sporting in the same play-ground with Oxford and Macnaughten. In prison he acted his part as well as he could. "He was calm and quiet," says Mr. Douglas Fox, the surgeon of the jail, "when he did not know that he was watched, but rolled his eyes strangely when he knew that he was observed."

Several witnesses were called for the defence. One proved that his general conversation was very strange,—that he talked very wildly; another that he said, "Mrs. Gee, I feel very curious—my head is very hot—I feel as if I should go beside myself." Another, who was an out-patient at the Nottingham Infirmary, saw him there, and was alarmed at the wildness of his conversation and appearance. Lastly, his father proved that the prisoner's uncle had been insane for 18 years, and had been in confinement; and that the prisoner, when 18 months old, had a fall upon a mop-nail, which cut his forehead severely over the eye, and left a scar which is still visible. In short, there was evidence enough to have got the prisoner off had it been backed by any of the medical witnesses. This did not happen; and Grocock was left to answer for his complicated crimes. The jury took a merciful view of the case, and found him guilty of the fourth count only, which charged the intent to do grievous bodily harm.

The sentence of the Court was, that he should be transported for life.

The jury expressed themselves not satisfied with the evidence of his insanity; but even if they had been, their verdict ought still to have been the same, according to Lord Brougham's test, which we adopted in a former article: for it is evident from the paper which the prisoner drew up, and in which he professes that he committed the crime in order to be transported or hung, that he knew that he was about to do what was legally wrong; and this was quite sufficient to make him legally responsible. It might be added

that his wish to be *transported* or hung is a strong and unfavourable commentary on the laxity which of late has so often substituted Australia for the gibbet in cases of wilful and deliberate murder.

We will conclude by observing that the late refinement touching monomania is the most alarming improvement ever made in psychology. "Had I been hanged," said Oxford, in Bethlem, "there would have been no more attempts upon the Queen's life:" had Macnaughten been hanged, Grocock might have spared his bold attempt to be hung "or transported."

NEW CHARTER OF THE COLLEGE OF SURGEONS.

[We have in recent numbers offered our remarks very freely on the above. Our respected contemporary of the "British and Foreign" has taken a view somewhat different, which may be interesting to our readers.]

The first and most important remark that suggests itself in reference to this charter, is, that its whole purport is to regulate the College as a simple corporate body, and that it does not confer on it one atom of power or a single privilege in relation to the profession. The new College, like the old, can give no license to practise, possesses no control whatever over any class of practitioners, and can oblige no one to enter its ranks either as a Member or Fellow. All its privileges consist in its power to bestow a title on those who choose to seek it, according to certain regulations. The organization and government of the medical profession, therefore, are not at all interfered with by the provisions of the charter, and await the enactment of the Medical Bill, so long in preparation by Sir James Graham. It is, no doubt, unfortunate that the granting of this charter was not deferred until after the passing of the bill; as the provisions of the charter —which can only be regarded as a mere subordinate matter of detail—may be found to hamper the more important provisions of the general measure. The difficulty will be increased if the physicians' charter is also granted previously to the enactment of the Medical Bill. We hope, however, that although it will be more difficult to frame a liberal general law in perfect harmony with these charters than it would have been to frame charters in harmony with it, yet that the difficulty is not insuperable. Should this, indeed, prove to be the case, we doubt not that the author of the bill will not hesitate to get both charters modified, rather than endanger the soundness of a measure on which the future welfare and prosperity of the whole medical profession will probably depend. Our object, however, at present being merely to offer a few comments on the new charter, as a code of laws for regulating one of the most important corporate societies in the profession, we shall leave all consideration of the general subject until another occasion.

It will not, we presume, be doubted by any calm and impartial judge, that this charter is a great improvement on the old. Some of its provisions certainly might have been improved; but, looking at it as it stands, we think the profession owes a debt of gratitude to Sir James Graham for insisting (as we believe he did) on its more liberal clauses; while it is, in many respects, creditable to the judgment of those Members of the College who were mainly instrumental in obtaining its enactment.

No man of experience need be told that it could be no easy task to bring a body of men, however honourable, in the actual possession of exclusive rights of long standing, of power and of property, and responsible to no one, to forego, in a great measure, their dearest privileges. And it were well that, when we criticise the proceedings of such persons, we should reflect what might have been our own feelings, views, and conduct, in similar circumstances. Examining the charter in this spirit, we must regard its provisions, on the whole, as good; and we think we may confidently expect from those who framed it, yet further improvements in its more liberal parts, if it should be found, in the working, to be injuriously restrictive of the legitimate rights and free action of the new constituency.

By the new charter the system of monopoly and self-election is for ever abolished; and it remains entirely with the future Members of the College whe-

ther the Council shall henceforth be such as they deem fit to represent and rule them. As by the new provisions, every Member may claim to be admitted a Fellow on attaining the age of 25; and as the election of the Council is left entirely in the hands of the Fellows, no apprehension need be entertained that the appointment of Councillors will be brought about by unfair means, or, consequently, that improper persons will be elected. The examination for the Fellowship will, of course, be of such a nature as any well-informed surgeon can pass—no Council would dare to make it unnecessarily severe: it cannot, therefore, be doubted but that the great majority of future Members will become Fellows, and thus a body of electors will always exist too large to be corrupted or seduced or "managed" in any way. Most important advantages will result from making the admission to the Fellowship through the door of a higher examination, and at a period subsequent to the ordinary termination of school studies. The men desirous of this honour—and, as we have said, we believe most Members will be so—will take care that in the first instance they *study up to the mark* of the Fellowship; and that should they at first take the inferior degree of Member, they will *keep up* the knowledge then obtained, or even continue to improve it, until they reach the age for claiming the higher title. Had we been framing the charter, we should have made the examination for the Membership a strict one, and the only one, leaving admission to the Fellowship contingent on the attainment of a certain standing as Member—say seven or ten years—and the payment of a moderate fee. We, however, do not quarrel much with the present arrangement, and see in it some advantages over the other, the most important of which is that just stated. A more serious objection to the new charter, in the eyes of many, will probably be the exclusion from the Council of practitioners of pharmacy and midwifery. In some respects we consider this as an important defect, more especially as regards the practitioners of midwifery. Although well aware that the progress of reform is not yet sufficiently advanced to justify any measure that would virtually forbid surgeons to practise pharmacy (that is, to send out their own medicines), we are still glad to see any enactment that tends to abolish this most impolitic, and, we may say, degrading association of trade with science. And we entertain no doubt whatever that the clause excluding practitioners in pharmacy from the Council of the College, will eventually have a powerful influence in abating this crying evil. Unfortunately, however, the coupling of midwifery with pharmacy as joint causes of exclusion, will interfere most materially with the progress of this reform. General practitioners may, without difficulty, cease to supply their patients with drugs; but we cannot see how they can cease to attend cases of midwifery without such a sacrifice of their interests as must more than counterbalance even the honours and advantage of a seat in the Council. In our zeal for the abolition of the trade in physic, we would have almost consented to the exclusion of practitioners of pharmacy even from the Fellowship, provided this obnoxious and impolitic exclusion of practitioners in midwifery from the Council had been abandoned. After all, however, this can only be regarded as a minor evil; and sinks into insignificance when viewed in conjunction with the real and substantial advantages conferred by the charter. We cannot doubt but that there will always be found in London and its vicinity enow of men in the class of pure surgeons (including many who have ceased to practise pharmacy and midwifery) from among whom the Fellows—that is, *the general practitioners* (for the vast majority of Fellows will eventually be general practitioners)—may choose fitting representatives and officers. It even will lie with themselves, hereafter, to obtain such modifications in the charter as they may deem more to their own honour and advantage. Every general practitioner may become a Fellow if he please; and every Fellow may, even by the present charter, render himself eligible for the Council: and it will go hard, if, with such potential vantage-ground, the majority should not be able to obtain the virtual, if not the ostensible supremacy in the direction of their own affairs.

The prescribed mode of electing members of the Council seems to us, also, if not a positive defect, certainly of doubtful propriety. It, no doubt,

obtained admission into the new charter because it formed a prominent feature in the old,—of which, indeed, it is an improvement. The obvious and natural mode of proceeding, as it appears to us, would have been—to limit the eligibility to be members of Council, to Fellows of a certain standing—say ten years—and then leave the selection to be made from this class, without any restriction as to individual seniority. And we cannot but apprehend that the reasonable desire on the part of the Fellows, to choose the men they may deem best qualified for the office of Councillors, may, in the working of this part of the measure, lead to results seriously affecting the harmony and respectability of the institution. We doubt not, however, that the more liberal members of the Council will take care, by great reserve in proposing the immediate re-election of retiring members, not to compromise the rights or just expectations of those placed lower on the list. In this manner we think the clause in question may, in a great measure, be deprived of the danger of which it appears to us to be at least a possible source. With regard to this clause, however, as well as to others which may seem objectionable, we doubt not that the new Fellows will have sufficient judgment and discretion not to condemn it or them absolutely, until their value has been proved in actual practice, and on more than one occasion; as it will be much more for their interests to put up with inconveniences or evils for a few years, and then to have them permanently remedied, than to run the risk, by a hasty decision, of only exchanging one blemish for another. There was never yet a code of laws devised for the government of any institution, which did not call for and receive subsequent alteration and improvement; and we have no right to expect that the new code of the College of Surgeons should differ in this respect from all its predecessors.

ROYAL COLLEGE OF PHYSICIANS.

To the Editor of the Medical Gazette.

SIR,

A CORRESPONDENT who subscribes himself "A Licentiate" (of the College of Physicians,) in the MEDICAL GAZETTE of last week (Dec. 29,) appears in great distress, poor soul! at the idea of being contaminated by the Extra-Licentiates of the same College. It makes one's tender heart ache with compassion for his misery at the prospect of such an alliance. "To them," (the London Licentiates) he cries, "it would be an injustice to thrust upon them a body of men who had not possessed the same qualifications."

To be sure it would! Let your touch-me-not correspondent ask Dr. Francis Hawkins, the Registrar of the College, what the difference consists in between the qualifications of the two classes of Licentiates: he will find, in all probability, that they are the same for both classes; a fact that he ought to have known before he presumed to meddle with such a subject.

As to the "examination," Sir Henry Halford, the President, who is present at, and superintends, the examinations of the members, of all classes, says, before the Committee of the House of Commons, that the examination of the London and the country Licentiates "is the same: it is the same examination." I should be disposed to take the President's word quite as readily as I would that of your *liberal* correspondent.

As some of your readers may not have taken the trouble to inform themselves upon this point, I will explain to them how the case stands.

The Act of 14 and 15 Hen. VIII., consists of the Charter (granted four years previously,) and of additional clauses. The charter applies only to the city of London and seven miles round. Another clause of the Act applies to the whole of England, beyond seven miles of London. According to the Charter, the London Licentiates are examined by the President and four censors, and no one can practise therein without possessing letters testimonial signed by the President and censors. According to the clause relating to the rest of England, candidates must be examined by the President and elects, and no one can practise beyond seven miles of the city, who does not possess letters testimonial signed by the President and elects. The consequence is, that the London Licentiates have no right, according to law, to practise beyond seven miles of the city of London; nor have the country Licentiates

any right to practise within seven miles of the same. This state of things might have answered very well 320 years ago, but, in this railway age, I believe the College see the inconsistency of it, and want to do away with it.

It is probable that the difference in the form of the examination of candidates arose from those of London and those of the west of England being examined by two distinct boards. The censors adopted the mode of dividing the examination into three parts, viz. 1. In parte anatomica; 2, in parte physiologica; and 3, in parte pathologica; whereas the elects adopted the plan of going through the whole of the examination, in all those branches, at one sitting. This plan, evidently, was had recourse to for the convenience of candidates who had a long distance to go to London; which, in those slow-travelling and throat-cutting times, was a subject of some consideration. I have perused several of the examination papers of the intra-Urban Licentiates, and I find that they, in each of the three departments, contain eight or nine questions, much the same as those put, *viva voce*, at the examination for the extra-Urban license. They are good, fair, practical questions, for the most part in both cases. The Latin works used in both are the same.

Now, surely, I cannot see why the elects should not be as good examiners as the censors; meaning not the slightest disparagement to the latter. We have heard something about age making a difference. We have Admirals commanding fleets and battering down forts at 80. We have Generals of districts nearly as old. We have a Lord Chancellor of 74; and some other judges running fast on. We have the Duke of 74, directing the whole of the army of the empire. Is there any thing in particular connected with our profession calculated to cause premature imbecility? or are the members of our profession more illiberal than those of any other, that they should insinuate such a thing against persons well known to possess full vigour of mind, and to whom the public do not hesitate to entrust their care of their health and lives?

Your correspondent adds, in his very liberal style, "to be consistent, the College must either raise the present Licentiates to the rank of Fellows, or allow the extra-Urbans to remain, as they are at present, a distinct grade."

That's the way the Devil reasons: "if I cannot get to heaven myself, I will take care that you sha'nt." That is an incontrovertible argument.

Let me conclude, sir, by observing, without the least intention, or wish, to detract from the merits of the London Licentiates as a class, that the extra Licentiates are for the most part men in extensive practice, and of many years' experience, fixed in the different boroughs and towns of England, and who have kept up their classical, as well as their anatomical knowledge, whilst pursuing the practical part of their profession. The cause of their late increase is to be found in the regulations of the College, issued in 1838, under which men of liberal education, wheresover acquired, are admitted as candidates for its diploma. Before that period the country physicians were mere Scotch graduates, who obtained their diplomas, as boys comparatively, at one and twenty years of age, and who were allowed to practise in England unmolested, although contrary to the Acts of Parliament, in that case made and provided, as your "Licentiate" will find, by referring to it. But the College wants reforming.

I am, sir,
Your obedient servant,
A Rural Physician.

January 4, 1844.

CASE OF
RUPTURE OF THE UTERUS
IN A WOMAN WHO HAD TWICE UNDERGONE THE CÆSAREAN OPERATION.

By Wm. Bowen, M.D., of Massilon, Ohio.

Few of the many histories of unfortunate child-bearing are more painfully interesting to the medical reader than the following; and certainly none, with which we are familier, presents features in obstetrical surgery more extraordinary; whether it be viewed in reference to the great constitutional stamina of the unfortunate patient, which enabled her to survive two successive operations, of the severity and danger of the Cæsarean section, or in regard to the circumstances which seemed to the practitioner who had charge of her case, to warrant a resort to such a hazardous procedure. The story of Mrs. S.'s lying-in-room adventures is one of such remarkable incident, and of such good and bad fortune, as to entitle it to a place among

those told of others, on whom the primitive curse, "In sorrow shalt thou bring forth children," has been most heavily visited.

Mrs. S., after having had four unfortunate labours, two of which (the third and fourth) were terminated by the abdominal section (her accoucheur, Dr. R. Estep, supposing she had deformed pelvis, which would render delivery of a living child at full time impossible), had the good fortune in her fifth confinement to give birth to healthy and vigorous twins at full time and of large size; but falling in labour the sixth time, she suffered laceration of the uterus, and survived but a few hours.

For the details of this last labour, I am indebted to my friend C. H. Preston, M.D., an intelligent practitioner of this county; for the history of the preceding one I am under obligations to Dr. Robertson, a skilful and popular physician of the adjoining county (Columbiana); while a circumstantial account of the third and fourth labours, in which the abdominal section was deemed necessary, and performed by Dr. R. Estep, has been published by the operator in the July number of the Western Journal of the Medical and Physical Sciences for 1836. As it may be fairly inferred that the disastrous termination of the last labour of Mrs. S. was owing mainly to the weakened condition of the uterus at the place where it had been twice incised; and as the circumstances under which such bold and dangerous surgery had been previously practised are given with some minuteness in the published report, the interest and value of the case, which it is more especially our object to communicate at this time, will be enhanced by presenting to the readers of this journal such portions of that report as seemed to the reporter to embody the best reasons for his practice; and whether these extracts be received as detailing a practice sanctioned by good sense and standard authorities, as conscientious surgery calculated to subserve the best interests of the patient, and worthy of imitation, or as a measure which in wanton violation of the plainest rules of obstetrical management unnecessarily jeopardized the life of the woman, they must still be regarded as parts of a document of no ordinary value.

In 1830, Dr. Estep informs us, he was called to attend Mrs. S., aged about 20 years, in her first labour: delivery was accomplished by the forceps. Suspecting deformity of the pelvis, he made an examination, and "found the antero-posterior diameter contracted to such a degree as to preclude the possibility of her ever giving birth to a living child approaching the ordinary size."

In 1832, he attended this woman again, and succeeded, with some difficulty, in delivering with the forceps of a "very small dead fœtus:" a more careful examination of the pelvis was now made, and it was found that the sacro-pubic diameter at the superior strait was reduced below two inches.

In 1833, Dr. E. says, he was called a third time to attend Mrs. S. in labour: she informed him that she had been in labour several hours, and that during the third or fourth pain she distinctly felt something "give way." From this account, Dr. E. suspected rupture of the uterus; he immediately introduced his hand, and "thought" he discovered a rent in the anterior wall of that organ, near its middle. Turning the child, with a view of delivering by the feet, was determined upon (the presentation was one of the vertex). The feet were brought down, and the trunk delivered; but no efforts were sufficient to induce the head to pass. "After three hours' indefatigable exertion (he says), I was unable to get the head engaged in the superior strait. Relinquishing all hope of success by this artifice, and being thoroughly assured of the child's death, I now separated the head from the trunk, in the vague hope of being able to get a better diameter of the head, or by locking the finger into the chin, to be able to apply a more efficient force; but in this I was likewise unsuccessful." After fruitless endeavours to extract the head with a perforator, Dr. E. proposed and performed the section of the abdomen: he found a slight rent in the uterus, which he enlarged to the extent of five or six inches, and extracted the head through it. The placenta was delivered by the natural passages; the wound in the abdomen was closed in the usual manner, and the woman recovered in a short time.

In 1835, Mrs. S. was again in labour, and Dr. Estep was called in consultation with Dr. Tolerton. This call, Dr. Estep says, he was prepared for, by having "every instrument and agent which could possibly be called for in requisition, carefully packed up where I could lay my hands on them at any moment." On reaching the residence of the patient, and examining per vaginam, he found "an arm presentation and a dead child:" the evidences of the child's death are not given. The Cæsarean operatian was again resorted to, without attempting delivery by any other method. This operation was as successful as the other; a dead child was extracted through the opening, and the woman soon recovered.

In 1838, Dr. Robertson was called to see Mrs. S., who was again in labour. On reaching the house, he says, "I found she had given birth to healthy and vigorous twins; their large size, and the globular form of their heads, left me no room to doubt the mother's having a tolerably ample pelvis. I removed the placenta, and satisfied myself that the pelvis was not as faulty as had been charged. Making a pelvimeter of my hand,

which I introduced for that purpose, I placed the ulnar edge of it upon the sacral projection, while its radial aspect scarcely touched the ossa pubis; thus giving the sacro-pubic diameter a space of about three and a half inches.

In 1841, my friend Dr. Preston wrote to me as follows:—"Last week I was called to see Mrs. S., in consultation with Drs. Robertson and Carey. I learned that the labour had begun about eighteen hours previously; that a midwife had been called in, who found a vertex presentation, and gave promise that labour would soon terminate. The uterus had been acting with great energy, when suddenly the woman exclaimed, "something has given way." Considerable hæmorrhage ensued, with vomiting and syncope: the uterine contractions ceased. In this condition Drs. Robertson and Carey found her, and matters had not improved any when I arrived. Examining per vaginam, coagula of blood were found, but the child's head was not within reach of the finger. These evidences, with those furnished by an external examination of the abdomen, made it plain that the uterus had ruptured, and that the child had escaped wholly or in part into the abdominal cavity. I proposed attempting delivery by introducing the hand and searching for the feet, with a view of bringing the child back through the rent in the uterus, and delivering it footling through the natural passages; but my colleagues, without doubting in the least the practicability of this method, were disposed to regard the woman as moribund, and to prefer that mode of delivery which would least endanger the life of the child, if, perchance, it still survived; they, therefore, insisted on resorting to the abdominal section. Observing that a division of the abdominal integuments through the old cicatrix would be unattended with pain or hæmorrhage, owing to its imperfect union and organization, I acquiesced in the propriety of the measure, and I am certain that no mode of delivery would have saved the woman. Dr. Robertson performed the operation. We found the child dead, and almost entirely in the abdominal cavity, the uterus having given way through the whole extent of the former cuttings. After the child and secundines were delivered, the woman seemed to revive; but her last labour had come: she survived about thirty-six hours." Before leaving the patient, Dr. Carey took special pains to ascertain the true dimensions of Mrs. S.'s pelvis; he avers that the transverse and conjugate diameters are of good size, but that the depth of it posteriorly is less than usual.

It will be perceived that the parties who paid obstetrical attentions to Mrs. S. have joined issue in regard to the size of her pelvis. Dr. Estep assures us that the contraction was such as "to preclude the possibility of her ever giving birth to a living child, approaching the ordinary size;" "that the sacro-pubic diameter was below two inches;" and of course it was upon this view of the condition of the pelvis that the propriety of turning and decapitation of the child, and the subsequent section of the abdomen, to deliver the trunkless head in the third labour, and the immediate resort to the Cæsarean operation upon finding "an arm presentation and a dead child" in the fourth confinement, are predicated. Drs. Robertson and Carey declare the pelvis to be of tolerably "good size;" that the sacro-pubic diameter, at the superior strait, measures at least three and a half inches. Without attempting to determine the truth of the matter at issue, by the number and credibility of the witnesses on each side, we think the circumstance of the birth of the twins, and the facility with which Dr. Estep turned and delivered the trunk and extremities of the child he beheaded, establishes the truth of Drs. Robertson and Carey's declaration in regard to the matter, as clearly as if the pelvimeter of Coutouly, or the calipers of Baudelocque, had been applied, and had testified to a reasonable amplitude of pelvis.

Admitting Dr. E., however, to be correct in his estimate of the size of this woman's pelvis, was it not a strange practice which sought to pull a child, footling, through a pelvis contracted in its sacro-pubic diameter at the superior strait to "below two inches?" He is an industrious accoucheur who devotes his muscles to "three hours' indefatigable exertion" to bring the large diameter of a fœtal head (occipito-mental, five inches) through an opening of less than two; and to have failed to accomplish so extraordinary a feat is no proof of the want of respectable physical qualifications. Separating the head from the trunk, "in the vague hope of being able to get a better diameter of it, or by locking the finger into the chin, to apply a more efficient force," was a device possessing strong claims to originality, but one which has not yet found favour in the eyes of our best obstetrical authorities. Dr. Dewees (page 580, System of Midwifery), says, "For what reprehension, indeed I had almost said punishment, would be sufficiently severe for that practitioner who, after having destroyed the child, should find it impossible to deliver it; and then, for its accomplishment, subject the poor woman to the Cæsarean section?" If it is difficult to recognize the necessity for so perilous an operation as the Cæsarean, in the third labour of Mrs. S., it is by no means an easy matter to discover good reasons for resorting to it again in her fourth confinement. It would, however, be paying a poor tribute to the discernment of

the reader to suppose him blind to the fact, that, in conducting the third and fourth labours of Mrs. S., rules were set at naught which have been held sacred to common sense by every writer on midwifery.—*American Journal of Medical Sciences.*

AMMONIA GROTTO.

Dr. Constantin James, who, while travelling with M. Magendie, made some observations on the Grotto del Cane, noticed in the Medical Gazette for Nov. 17, p. 222, has made some more remarks on a neighbouring phenomenon in the *Gazette Médicale* of the 9th instant, of which we give the substance. In the same number is a notice of Mr. Smee's opinions, on the inhalation of ammonia as a therapeutic agent.

At a little distance from the Grotto del Cane, and at the foot of a rising ground remarkable for its rich vegetation, is the *Grotte d'Ammoniaque* — ammonia grotto. It was discovered accidentally about a dozen years ago. The Prince of Capua had a tent pitched, for the convenience of shooting wild fowl, near the Lake of Agnano. Some workmen in the surrounding plantations, while digging a ditch, felt suffocated by the gaseous emanation from the soil. It was supposed to be like that of the neighbouring Grotto del Cane; and, in fact, animals placed in the opening speedily died of asphyxia. The gas, however, when analysed, proved to be not carbonic acid, but ammonia, and gives its name to the grotto erected on the site of the ditch. Much less celebrated than its more popular neighbour, this grotto is not less interesting and attractive to the curious; and it possesses, moreover, valuable remedial powers.

The interior of the grotto appears like a ditch, nearly square, about a metre in depth, covered by masonry to the height of three metres. It is entered by a small door, for opening which rather a high fee is exacted. On entering, no smell or other indication of the presence of ammonia is perceived while standing upright. The soil is dry, brownish, friable, without a trace of vegetation. The gas is found at the lower part of the grotto, contrary to what would be expected from its low specific gravity. This depends, doubtless, on some physical or chemical combination not yet accurately determined, and requiring more exact observation. It may be presumed that the gas is in the state of a carbonate, though the usual name of ammonia is retained in this description.

The essential characters of an ammoniacal exhalation are easily detected with the ordinary re-agents. Reddened litmus paper is turned blue; hydrochloric acid in an unstopped bottle gives the white vapour of hydrochlorate of ammonia. The peculiar penetrating odour, the disagreeable sensations, and the pungent flavour of ammonia, were perceived on raising the gas with the hand to the mouth and nose. A torch was extinguished in it, and the height of the stratum was thereby measured. It entirely filled the ditch. It was ascertained that no escape took place at the threshold or elsewhere. When made to flow out, the ditch filled as fast as the gas was wafted out, so that the same level was preserved. The secretion was then arrested, as if the air saturated with ammonia could take up no more.

The head may safely be plunged into the gas, if care be taken not to breathe it, which would risk suffocation. Asphyxia from privies is owing in great degree to the ammonia they disengage. It is well, too, to stop the mouth and nostrils, to prevent disagreeable irritation and sneezing.

While examining the spot M. James met with an invalid, an Englishman, with whom he speedily made acquaintance, and whose case shewed him some of the remedial powers of the grotto. For more than a year this patient had suffered from chronic engorgement of the eyelids, injection of the conjunctiva, and weakness of sight, which no treatment had relieved. Having quitted the fogs of England, he had travelled to Naples, and hearing, in an excursion to the grotto, that many persons suffering as he did had been cured by fumigation with its gas, he tried it, and in a few days got well. It was certain that the conjunctiva had nearly regained its whiteness, only a few varicose and mobile vessels remaining on the outer side of the right eye; the left was still better, and the sight of both had become stronger. The pupils, though rather dilated, contracted naturally.

This was his fourteenth fumigation, and was conducted as follows:—Closing his nose and mouth, he stooped with his face in the gas for seven or eight seconds at a time. His eyes soon filled with tears, which at length poured down in torrents, the eyelids winking rapidly. After several immersions he washed his eyes with very cold water, and put on blue goggles furnished with black taffetas. For half an hour the eyes remained red, and the pupils strongly contracted, with some pricking and shooting pain. By degrees nothing remained but lachrymation, which generally lasted all day.

This fumigation acts no doubt like other applications, which stimulate the languid vitality of the tissues. It may perhaps be better than some others, as exciting the small vessels without leaving behind a foreign substance. The *custode* said he had seen many amaurotic patients treated thus; and told the case of a man quite blind, who, by

fumigation alone, had recovered his sight*. M. James is not surprised at this, as Scarpa has employed with advantage the vapour of ammonia in treating certain paralyses of the iris and retina; but asks whether the gas of this grotto may not be more efficacious than the usual compounds of ammonia, as natural mineral waters are far better than artificial?

M. James thought it needless to repeat on himself the experiments he had seen tried on the Englishman; the custode had no scientific habits, had not even a dog, for visitors are so few that the demand for suffocation would not pay for its keep. *Heureusement* Mr. James had brought some rabbits. One of these put into the grotto ran about distractedly for escape, fell down, scratched its nose violently, tried to rise, fell again, and uttering the well-known cry which indicates speedy death—the eyes burning, the mouth half open, the body trembling and convulsed—died in about a minute. All the means of resuscitation which had succeeded at the Grotto del Cane failed against this more terrible suffocation. The one gas, merely, does not support respiration; the other is actively deleterious. There is a similar difference between nitrogen and carbonic acid, and different gases vary in activity and power. Sulphuretted hydrogen is worse than ammonia. The dead rabbit was examined, but the death had been too rapid for the ordinary changes of asphyxia to take place. A quarter of an hour afterwards the lungs examined again showed all the signs of pneumonia by extravasation. In asphyxia, then, the more rapid the death, the slighter the changes of structure. The cornea was dull; the eyes and nostrils clogged with viscous secretion. These effects of its caustic properties may sometimes in medico-legal cases determine that ammonia has been the cause of suffocation. From motives of humanity only one other rabbit was sacrificed to an experiment which could gain no value by repetition; but a frog was put in, and after surprising the experimenter by the preternatural vigour of his leaps, died in one minute. The surface, not of the lungs, but of the skin, was thus painfully suffocated, being mucous, permeable, and unprotected. A few remarks on this subject, in connection with the known properties of the permeable tissues, may be reserved for a future occasion.—*Gazette Médicale.*

* Readers of the *Times* would probably prefer, what readers of the GAZETTE would doubtless recommend, viz. that amaurotic patients should spend their guineas in trying the effects of the grotto and green spectacles, rather than in undergoing, first, fumigations, and afterwards litigation for fees, with a certain London practitioner.

VEILBACH.

As to Veilbach, it is quite a new creation, of which no account is any where to be found. Its situation is in a W. S. W. direction, and about an hour and three quarters from Wiesbaden, ascending by the road leading to Frankfort. The spring is in the centre of a rotunda or temple, and flows incessantly and profusely through four marble spouts, around a pillar or shaft placed in the centre of a marble basin, into which the water flows; while deposits are formed, in the course of the day, both in the spouts and around the brim of the basin, which are cleared away by the morning. These deposits are sulphur, the characteristic gas of the water being sulphuretted hydrogen, of which Kastner, the professor of chemistry, who analyzed the water in 1839, found nearly three cubic inches (2,949) in a pint. In a glass, the water appears perfectly colourless and transparent, a few very minute bubbles of gas being seen ascending for a short time. Tasted deliberately, one recognises at once that peculiar sweetish flavour belonging to the sulphuretted waters, which proceeds from the decomposition of vegetables, or from peat-earth, and not from pyrites or shale, as first pointed out by me. It has no decided saline taste during or after drinking it; but a species of pricking of the tongue, as when a green mustard-plant is chewed, manifests itself, and continues for some time. This sensation is never present in rock, or really mineral, sulphuretted water. Judging by the quantity of alkaline carbonates said by Kastner to be contained in this water, amounting to more than the half of the whole solid ingredients in it, a medical man would consider it not only as a peculiar, but as a most valuable addition to that class of mineral waters of which Harrowgate may be taken as the type. In its effects, however, I should expect it to differ materially from the latter water, in which neither the carbonate of soda and potash, nor the carbonate and muriate of magnesia, is present, as in the very singular water of Veilbach. A longer experience is wanting to tell us what its specific virtues are likely to prove.

A large insulated hotel has been erected near the spring, having a well-arranged establishment for baths; and in this, the only building in the place, the sixty or eighty invalids who come to drink the water are lodged and boarded. Veilbach is an important addition to the long list of mineral sources of the duchy of Nassau, from its being the only sulphur water discovered there.—*The Spas of Germany Revisited.* By Dr. Granville.

EXCISION OF THE WHOLE LOWER JAW.

The case of excision of the whole lower jaw, related by Dr Bartolome Signoroni, is interesting as showing that patients may recover after removal of the whole jaw, and preserve the power of swallowing, and the faculty of speech. In this case, on account of an osteo-sarcomatous affection, the whole jaw was removed at its articulations. The patient speedily recovered, and was a few months afterwards exhibited at Padua, to the Italian Scientific Association. He had completely regained his health, swallowed easily, and his speech was scarcely defective. It is much to be regretted that the details of this case are not given; it may, however, be gathered from the remarks which follow the simple announcement of its success, that the bone was extracted piece-meal, being divided into portions by means of the cutting pliers introduced through subcutaneous incisions. It is to this mode of operating the author attributes the small quantity of blood lost, the rapidity of the healing process, and the general success of the operation. No mention, however, is made of the size of the tumour, the amount of the lower jaw which it involved, or the necessity which existed for removing the whole bone.—*Annali Universali;* and *Edin. Med. and Surg. Journ.*

ON THE

DESTRUCTION OF THE CONTAGION OF THE PLAGUE.

A committee of Russian medical authorities has been making experiments in Egypt, on the destruction of the contagion of the plague, by means of hot air. The woollen articles of clothing were worn by persons decidedly affected with the disease, for twenty-four hours, exposed to a heat of 144° to 167° Fahr., in a heated room, and were then worn by persons in perfect health, who had held quarantine in disinfected clothing. These persons, fifty-six in number, wore the woollen clothing during a fortnight, and not one of them became subject to the plague for several weeks after the experiment.—*Pharmaceutische Central Blatt.* No. 48, Oct. 1842.

CURIOUS CONFERVOID ANIMAL,

OBSERVED BY DR. VAN OYE.

This conferva was found in the stream of a shallow brook, and being examined with a magnifying glass, and a microscope, presented the curious spectacle of a double transformation. The tubes of the conferva separated in the water into a considerable number of animalculæ possessed of life and voluntary motion; and they afterwards united again at the expense of these same animalculæ, in which all animal life had become extinct.—*Annales de la Société Médico-Chirurgicale de Bruges.*

MANCHESTER UNION HOSPITAL.

The Senate of the University of London has recently recognized Certificates of Attendance on the Medical Practice and Clinical Lectures of the Manchester Union Hospital.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, December 30, 1843.

Small Pox	16
Measles	27
Scarlatina	54
Hooping Cough	32
Croup	12
Thrush	3
Diarrhœa	4
Dysentery	4
Cholera	0
Influenza	4
Ague	2
Remittent Fever	0
Typhus	33
Erysipelas	5
Syphilis	0
Hydrophobia	0
Diseases of the Brain, Nerves, and Senses	157
Diseases of the Lungs and other Organs of Respiration	290
Diseases of the Heart and Blood-vessels	24
Diseases of the Stomach, Liver, and other Organs of Digestion	70
Diseases of the Kidneys, &c.	9
Childbed	9
Paramenia	1
Ovarian Dropsy	0
Disease of Uterus, &c.	3
Arthritis	0
Rheumatism	1
Diseases of Joints, &c.	2
Carbuncle	0
Phlegmon	0
Ulcer	0
Fistula	0
Diseases of Skin, &c.	0
Dropsy, Cancer, and other Diseases of Uncertain Seat	109
Old Age or Natural Decay	73
Deaths by Violence, Privation, or Intemperance	46
Causes not specified	17
Deaths from all Causes	1007

NOTICES TO CORRESPONDENTS.

We beg to refer Dr. Ritchie to our number for Dec. 22, 1843.

It would be contrary to usage to copy the critique alluded to by Mr. G., of Liverpool.

Mr. Higgins' answer to Dr. Badeley next week; unfortunately it was too late for the present number.

Papers have been received from Dr. Percy, Dr. Knox, Dr. Burton, Dr. J. B. Thompson, and Dr. Heaton.

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, JANUARY 19, 1844.

ON PNEUMO-THORAX:

AN ESSAY,

Read (in part) at the Physical Society of Guy's Hospital,

By H. M. Hughes, M.D.

One of the Assistant Physicians to the Hospital.

[Continued from p. 471.]

Case VII.—*Pleuritis—Pneumonia—Gangrene of the lung—Pneumo-thorax—Gas in the pericardium.*

J. B., aged 30, an Irish labourer, with dark hair and nearly bald head, looking as old as 45, was admitted into the hospital under my care, August 18th, 1843. He stated that he was quite well a fortnight before, and that he had not been previously troubled with cough, and had never suffered from hæmoptysis; but that twelve days ago, while hard at work, and perspiring freely from his exertion and fatigue, he was suddenly seized with such a severe pain in his left side "that he could not stir;" that he had had no cough, but had suffered only from pain in the side, and that he had neither had, nor sought for any medical advice, till he presented himself among the out-patients at the hospital. He was far too ill to send away, and therefore, though in a wretchedly filthy state, after being well washed with soap and warm water, he was put into a warm and clean bed; and depressed as the poor fellow was, he appeared exceedingly happy and grateful for his accommodation. He was indeed already very low, his face pale, his countenance haggard, and expressive of severe distress; but his skin was hot; his tongue much loaded, brown, and moist; bowels not open for two days; he still said he had no cough, and complained only of pain in the side and difficulty of breathing. His respirations were 40 in the minute; his pulse 120, small, and very feeble; he lay upon his left side, and could lie upon his back, but not upon the right side.

Physical signs.—On the left side there was a little increased fulness, but no bulging; the inferior ribs were not elevated on inspiration. Dulness on percussion existed on the left side as high as the spine of the scapula posteriorly, and anteriorly as high as the infra-clavicular region, which alone afforded tolerable resonance. The respiration was inaudible, or distant and tubular, excepting above the line of dulness, and even there was hoarse and imperfect. The voice was on this side less resonant than natural in the parts in which dulness existed, excepting over the mamma, where imperfect pectoriloquism was discovered; while in the infra-clavicular and acromial regions no peculiar modifications of the voice were perceptible. "Tactile vibration" was absent inferiorly. The impulse of the heart could not be distinguished below the left nipple, or on the right of the sternum, but was felt more distinctly and strongly than natural at the epigastrium. The sounds and rhythm were normal. The right side of the chest was resonant on percussion, but the respiratory murmur was obscured by sonorous and mucous rattles. Ordered—

Olei Ricini, ℥ss. statim sumend. Appl. C. C. parti dolent. ad ℥vj. Pil. Antim. Opiat. c. Hydr. Chlorid. gr. j. 6tis horis e haustu Julep. Ammon. Acetatis.

19th.—He had little sleep in the night; bowels relieved by the oil. He coughed "now and then;" tongue loaded, creamy, and moist; pain of side continued; other symptoms and signs as before.

Appl. Empl. Cantharid. magn. lateri sinistro. Pergat.

21st.—Said he felt better, and had but little cough, and no expectoration; tongue still much loaded, but moist; skin hot, dry, and pungent; pulse 120, small and feeble; bowels not open; respirations 28, easy.

The dulness was as before, excepting that anteriorly and inferiorly resonance now existed, arising probably from a distended stomach. The infra-clavicular region was still free from any peculiar morbid sound; but in the left mammary region was now heard distinct amphoric respiration, as from a large tube entering a cavity; and in the same situation was now audible a little resonant mucous rattle, approaching to gurgling, and imperfect pectoriloquism. The impulse of the heart could be felt only at the scrob. cord., where it was still forcible and rather bounding. On this day was for the first time heard a very peculiar sound in the precordial region with each systolic and diastolic movement of the heart, but most distinctly with the former. It was between a rubbing noise and that produced by a solid body striking against a cavity, and causing the agitation of a fluid mixed with gas, or the noise of fluid escaping from a bottle, with intermissions produced by the ingress of air. It might be indifferently represented in letters thus: — Bllop Bllop — Bllop Bllop — Bllop Bllop. It was very loud, most distinct below the left mamma, but audible, but with decreased intensity, as the ear or stethoscope was removed from this part in the course of the aorta, on the right side and the posterior part of the chest, and at the scrob. cordis. It was also distinctly heard when the ear of the observer was removed two feet from the chest of the patient, and imperfectly audible at even three feet. I had never heard anything exactly like it before. It might be supposed to arise from the heart striking against a cavity containing fluid and gas, the parietes of which cavity were covered with soft or plastic lymph. He had either swallowed or not preserved his expectoration, if he had any, but he resolutely maintained that he had none. A porringer was placed by his side, and particular injunctions were given that every thing expectorated might be saved, whatever, or how little soever, it might be.

Capt. Olei Ricini, ℥ss. statim. Hydrarg. Chlorid. gr. iss. 6tis horis sumend. e haust. Julep., Ammon. Acetatis, et Vin. Antim., Potassio-tartrat. ℳlx.

22d.—Said he had nothing the matter with him but weakness; but the skin was intensely and pungently hot, and the tongue loaded. The bowels had been opened by the oil; the blister had healed; the physical signs were unchanged, excepting that some dulness and resonance of the voice existed below the clavicle. It was now ascertained that, so far from having no expectoration, he had brought up about three ounces in the twenty-four hours; that it was of a dirty mucous character, with little froth, resembling bad gruel, and had a very disagreeable, but not decidedly gangrenous odour

Rep. Empl. Lyttæ magn. lateri sinistro, et pergat.

23d.—Fever intense; physical signs unchanged, but he was far too ill for minute examination.

Rep. pil. et mistura 4tis horis.

24th.—Aspect very much improved; skin much less hot, almost natural in temperature; and tongue much cleaner. The left side was now dull up to the very clavicle, and the voice was very resonant below that bone. The fluid sounds were now not so marked in character, and more resembled the ordinary rubbing or scraping sounds of a roughened pericardium or pleura, but they were still very peculiar, and extensively audible.

Rep. pil. ter die. Contin. mistur. ut antea.

25th.—The cough was neither frequent nor severe, but the expectoration was considerable, dirty, frothless, and fœtid. Pulse 120, feeble. Respirations 26, and easy. The heart was now felt at the right of the sternum, as well as at the scrob. cordis, where, as well as over the greater part of the chest, a rough grating sound was heard more or less distinctly, while below the left nipple the curious noise of Bllop Bllop was still audible. He had no heat of skin, and no distress of countenance; the tongue was cleaner, and moist, without any redness, but indicated the constitutional effects of the mercury. The bowels had been relaxed three or four times.

Hydrarg. c. Cretâ, gr. ij.; Pulv. Ipecac. C. gr. iij. M. ft. pulvis 6tis horis sumend. c. Mist. Mucilaginosa.

26th.—The bowels were relaxed three or four times in the night, and, to use the nurse's expression, he seemed "very low." Mr. Stocker, the apothecary, was sent for, and ordered an opiate enema. He had no evacuation subsequently, but he rather unexpectedly expired at a quarter to 12 A.M.

Inspection, 49 hours after death.—The head was not opened. Thorax: on removing the sternum, the anterior edge of the left lung was found to extend to the right side of that bone, so as almost to conceal the heart, which was itself pushed much to the right side, the apex being opposite to the middle of the sternum. The pericardium, wherever in contact with, was adherent to the left pleura pulmonalis by pretty firm and œdematous lymph. Before it was opened it appeared distended; but on a section being made of the membrane, it seemed not to be more than two-thirds filled by the four ounces of clear yellow serum which it contained. At the bottom of this fluid was one loose mass of flocculent lymph, and upon its surface were several bubbles of gas, varying

in size from a pea to a small marble. At one spot, which was adherent to the pleura, and opposite to a cavity to be afterwards mentioned, it was very red, and appeared almost on the point of giving way. The heart itself was soft and flaccid, but in other respects, together with its valves, was perfectly healthy. The greater portion of the upper lobe of the left lung was adherent to the costal pleura by firm lymph, and, with the exception of the thin internal edge, which was white and transparent from œdema, was of a dirty greenish colour, perfectly airless, sank in water, and contained several depôts of matter of the size of peas, but no trace of tubercles. The lower lobe was anteriorly adherent to the costal pleura, to the pericardium, and to the diaphragm. On separating the adhesions to the costal pleura, the finger passed into a large cavity in the serous membrane, from which burst a large quantity of fœtid gas, and dirty gruel-like serum, the amount of which had caused a considerable descent of the diaphragm on that side. The quantity of the fluid was about five pints. The surrounding membrane was covered with a thick layer of yellowish opaque-fibrinous exudation. The lower lobe of the lung contained several cavities, which were generally of the size of a bean, but two of which were as large as a pullet's egg, though irregular in form. One of these was close to the diaphragm; the edges of the other were firmly adherent to the pericardium, opposite to the apex of the heart, and to that portion of the serous covering of the organ which has been previously mentioned as being of a deep red colour. These several cavities were almost empty, and had a soft, flocculent, dirty, brownish-green lining. Their external parietes were well defined, and surrounded by pulmonary tissue, which was dark, but still crepitant. The odour was fœtid, and the loose shaggy membrane of some of them floated in the pleuritic fluid, into which air blown into the left bronchus freely escaped, through the large irregular apertures thus formed. It was attempted to be ascertained if air passed from any cavity into the pericardium, by inflation of the lung. The attempt was not successful; but as it was made previously to the lung being disturbed, it is pretty certain that a great portion of the air contained in the left pleura was introduced thereto by these means. The right lung was healthy. Abdomen: The liver was large and myristicate. The kidneys large, congested, and coarse. The stomach and intestines, spleen, and pancreas, appeared healthy.

The preceding case presented many very remarkable features. Among the principal are the strange noise caused by the motion of the heart, and the presence of air in the pericardium. My colleague, Dr. Addison, and several, but too few, of the pupils heard this noise, and agreed that they had never heard anything exactly like it before. Dr. Addison rather curiously compared it, without any communication with me, to what I had in my note-book previously represented it to be like, viz. the heart beating against a cavity containing both air and fluid. It is somewhat remarkable, that of this noise three *possible* sources were discovered after death, viz. air mixed with serum in the pericardium, gas mixed with fluid in the pleura, and a gangrenous cavity in the lung close to apex of the heart. Of these, I believe the last to have been the most probable, or the almost certain, origin of the noise; and for the following reasons:—Though no obvious source of the air in the pericardium was discovered, it may be a question for very reasonable doubt if it existed therein long before death, and if it did not escape by minute apertures from the gangrenous cavity connected with it through the spot of highly inflamed membrane. The rhythm of the heart was perfect when the noise was the loudest and most peculiar, and indeed whenever I examined it. There was none of that tumultuous action, or inequality, which would almost certainly have existed, if air together with fluid had been present in the pericardium. That the noise arose, not from the agitation of the gas and serum in the pleura, communicated by the heart through the partially consolidated lung, is rendered probable by what I have previously stated, viz. that a great portion of this air was almost certainly introduced into the pleura by the inflation of the lung after death, by the reflection that no positive indication of the existence of pneumo-thorax was discovered during life, and that, though the noise was heard in most parts of the chest, it was most loud over the apex of the heart. That it did arise from the beating of the apex against the gangrenous cavity containing air and fluid appears probable from the circumstance last mentioned, from the exact resemblance it had to a noise arising from such a cause, and from this supposition being consistent with all the other signs and symptoms presented by the disease. It may also be worthy of notice, that the gangrene did not affect that portion of the lung which was most inflamed, but that which was most compressed by the fluid. I mention this, not because I believe that pneumonia never gives rise to gangrene in persons who are low and wretched, and nearly starved by cold and abstinence, but because I think that, in this case at least, it probably arose from the supply of blood being partially cut off from the lung of a person already much reduced by his disease, that lung being prevented from collapsing by old and firm adhesions to the costal and phrenic pleura.

If this view of the cause of the gangrenous cavities is correct, it may be questioned if it would not have been advisable to have tapped the chest. I think it would certainly have been a proper plan of treatment to have been adopted; and I was constantly upon the watch for a favourable opportunity, as regarded the condition of the patient, of having the operation performed. Unfortunately no such opportunity appeared to me to present itself. The man probably ultimately died from the escape of air into the pericardium.

CASE VIII.—*Phthisis—Pneumonia—Empyema—Pneumo-thorax?*

(I lament that this case is in every respect defective. I took no notes of it myself, and am indebted to the public records of the hospital and my own memory for the few particulars detailed.)

W. L., aged 25, a shoemaker, residing in Bermondsey, of small and delicate frame and sickly aspect, presented himself to me among the out-patients of the hospital, Nov. 23d, 1842, but being exceedingly ill, was taken in and placed under other care. He stated that he had been in the habit of working in a damp room, and that he was first attacked with pains in the limbs, followed, in about nine days, with hoarseness and cough. In one of his attacks of coughing he expectorated a tea-cupful of bright frothy blood. His mother died of an affection of the chest, accompanied with cough. A fortnight previously to his application he had been seized with pain of the chest. He had lost flesh, and perspired at night. On admission he was affected with pain of the back and left side; frequent cough, with expectoration of muco-purulent matter mixed with blood, and considerable dyspnœa. The whole of the chest was rather dull on percussion, but this dulness was particularly remarkable in the lower part of the left side, anteriorly and posteriorly. Cavernous respiration and gurgling were audible over the left mammary region, and muco-crepitating rattle throughout the greater part of this side posteriorly; but both at his admission and during the few days he afterwards lived, he was in too feeble a state for minute physical examination. He constantly lay upon the left side. In the notes of his case I perceive nothing particularly worthy of notice till his death, Dec. 6th, except that he continued to complain of pain in the left side, that he perspired profusely, and that the expectoration became purulent, and "left the side of the vessel in a mass."

Inspectio cadaveris, 32 hours after death.—On removing the sternum a cavity was laid open in the mammary region as large as half a fœtal head: it appeared perfectly circumscribed by the surrounding adherent pleura, was crossed by bands, and lined with loose opaque fibrin, but its connexion with the bronchial tubes was unfortunately not examined. The pleura, in a sac entirely unconnected with the cavity just noticed, contained a pint and a half of puriform fluid, and was at other parts covered with a pale dense and thick new membrane. The lung itself was sprinkled with large opaque white tubercles, and was in different parts firm, watery, or purulent, from a low form of pneumonia. The right lung was firm and œdematous. The heart was natural, and nothing remarkable was discovered in the abdominal viscera.

I have introduced this very imperfect case solely on account of the cavity in the mammary region, which I believe to have been a defined pneumo-thorax, accompanied during life with all the signs of a phthisical cavity. Its especial relations with the pleura and with the bronchial tubes were unfortunately not minutely investigated, and I am therefore unable to pronounce, with absolute certainty, that my belief was founded on fact.

CASE IX.—*Phthisis—Pneumo-thorax?—Empyema?*

J. D., aged 28, admitted into Guy's Hospital, August 2d, 1843, under the care of Dr. Babington. He formerly carried on the business of a sail-cloth maker in the country, and was at that time in the practice of drinking pretty freely of gin and water. His subsequent occupation as an inn-keeper at Islington, probably tended but little to the diminution of this habit. To the cold and damp cellars of his establishment he attributed the origin of his present illness, during great part of which he had been confined in the Queen's Bench Prison: he was thence removed to the hospital. He had lost one brother at the age of 50, but he had a father, mother, two brothers, and one sister, still alive, and in good health. For the last two winters he had been troubled with cough for six or eight weeks, but he had hitherto always lost it during the summer. On admission he was pale, thin, and freckled; of light complexion, and about 5 feet 10 inches high. For the last three months he had been more or less troubled with rheumatism, and four weeks since he had a severe pain of the left side, since which his cough had been less frequent and troublesome. He had at no time any large amount of expectoration, nor did he remember ever having been attacked with sudden and violent dyspnœa. He lay on his back, with his shoulders slightly elevated, and the body rather turned to the left side, but he could lie without inconvenience upon either side, or perfectly supinely. He had but little cough, and his expectoration was scanty, thick, muco-purulent, and destitute of air-bubbles. He talked freely, and sat up in bed without dis-

tress. The skin was natural, and he said he did not perspire except in very hot weather; the pulse 120, very small and feeble; the respirations 26, and perfectly easy; the face and body were emaciated, the countenance expressive of care, the tongue clean and moist, and rather pale. *Physical signs.*— Some flattening existed below both clavicles, but the form of the chest was not otherwise abnormal; no enlargement or bulging was perceptible. The right side sounded generally pretty well upon percussion, and the respiratory murmur was no where deficient, though at some parts it was puerile, and in others hoarse and rough. The infra-clavicular, and upper part of the mammary regions of the left side were more resonant than natural, but not tympanitic upon percussion; and in the recumbent position there appeared little or no dulness anteriorly, even at the lowest part of this side of the chest. Posteriorly dulness existed as high as, or above, the inferior angle of the scapula. The respiratory murmur was imperfectly audible both before and behind at the upper part of the left side, but near the nipple the breathing was occasionally fistulous, with a metallic ringing. This was not observed to accompany the voice or cough. Posteriorly and inferiorly the respiration was either entirely absent, or distant and indistinct. There was not at this part resonance of the voice or tactile vibration. About the lower angle of the scapula, Hippocratic succussion was easily and constantly produced by shaking the body. I had many opportunities, by repeated experiments, of verifying these signs, which never materially varied. He died, rather unexpectedly, August 14th. The inspection of the body was not permitted.

As the body in this case was not examined after death, it cannot be asserted, positively, that it was one of pneumo-thorax and empyema. I have, therefore, inserted a note of interrogation after these terms at its heading. I believe, however, there was at the time but little if any doubt upon the subject. If the presence of this affection is assumed, the case presents a striking instance of the absence of the marked symptoms which often accompany the first formation of the complaint; as the patient stated, after repeated examinations, that he had never been suddenly seized with dyspnœa or collapse, and it was almost accidentally that some of the most marked signs enumerated were discovered at the first visit. The side was not enlarged, there existed no tympanitic resonance on percussion, and, except where the presence of fluids was clearly indicated, the respiratory murmur was not altogether absent. If the case, on the contrary, be regarded as one of simple phthisis, then it presented the still more rare phenomenon of Hippocratic succussion in a phthisical cavity.

CASE X. — *Phthisis — Pneumo-thorax — Empyema. — Death after about two months.*

(For the previous history of this case I am indebted to Mr. Arnold, the industrious clerk of the ward.)

H. S., aged 26, stated to be a widow without children, admitted into Guy's Hospital, Sept. 13, 1843, under Dr. Babington, but during his absence from illness placed under my care. She was of fair complexion, with light hair, and had always been "delicate." She had lived loosely and intemperately, had ulcers on the legs for the last two years, and for the last six months had been greatly dejected in spirits, from having been deserted by a person with whom she had previously cohabited. She had been treated for hysteria. About six weeks before her admission she had severe shiverings, followed by heat of skin, thirst, sore throat, cough, difficulty of breathing, and pain of the chest, many of which symptoms had continued with greater or less severity up to that time. She came to the hospital for advice till five days before, when she was *suddenly seized with violent dyspnœa without pain*, and had since been confined to bed without medical assistance. When first brought to the admission-room she was pale and faint, and breathed with such evident distress as to lead me to say, "that person breathes like one suffering from pneumo-thorax." I ordered her to be put to bed immediately, but had little thought that the supposed resemblance would prove to be a reality. When first visited her face was bedewed with perspiration, her extremities clammy, and her dyspnœa was extreme. She was exceedingly faint; the pulse was so feeble and frequent as not to be counted, and the distress so great as utterly to preclude any examination: she was therefore ordered some wine, and to be kept perfectly quiet. When seen two hours after, she had rallied a little, and was lying on her right side. Her respirations 40 and anxious, her pulse 120, and very small and feeble. The extreme distress previously exhibited by her countenance had in a great measure disappeared, but she could, even then, not speak above a whisper. She had no pain, very little cough, and scarcely any expectoration; the very trifling quantity seen was muco-purulent; the tongue was rather dry, and brown; she complained of thirst, but had no vomiting or flatulence; the bowels were rather relaxed; the catamenia, previously profuse, had been altogether absent for the last two months. *Physical signs.*— Huge pendulous mammæ, reaching nearly

the umbilicus, and still urgent distress, prevented any minute examination. The ribs on the left side were alone elevated upon inspiration. Percussion elicited a dull sound over the whole of the left side anteriorly, and over the infra-clavicular region of the right side; the latter was preternaturally resonant under the mammæ and in the axillary and lateral regions. Both sides were moderately and nearly equally resonant posteriorly, conceding on the right some dulness, on account of the liver. Throughout the whole of the left side, anteriorly, were heard mucous rattles, which below the clavicle approached the character of gurgling. Posteriorly, on this side, sonorous and sibilant rattles were chiefly audible, mixed at some parts with pure bronchial respiration. The respiratory murmur was absent over the whole of the right side. Some bronchial breathing was alone audible in the acromial-scapular and infra-clavicular regions, and close to the dorsal spine. At other parts, and particularly posteriorly, was heard shrill metallic respiration, but no distinct tinkling. The cough and voice, as far as she was capable of exciting the one or of employing the other, were purely metallic. Hippocratic succussion was very evident. These signs were gradually and slowly elicited, as her strength would permit. Ordered—

Julep Ammoniæ, 4tis horis; Ext. Hyosciami, gr. v. hora somni; Wine, ʒiv. or vj., as required, Good beef-tea and arrow-root. Perfect rest.

By the employment of these means she rallied surprisingly, and though, when recumbent, she constantly lay upon the right side, she was able to sit up in bed without distress; colour returned to her cheeks; her countenance lost much of its anxious expression; the cough was far from severe, the expectoration trifling, and the respiration no longer laborious. Physical signs unchanged. By the aid of a pill containing a quarter of a grain of muriate of morphia, she slept well at night.

Sept. 28th.—She lay the whole of last night upon her left side, and at the visit was sitting up in bed and looking cheerfully. The breathing was not now amphoric, but the voice and the cough still had a metallic resonance, and the splashing on succussion was still distinctly audible. Harsh respiratory murmur, with bronchial respiration, was now heard in infra-clavicular, acromial, scapular, and interscapular regions. The dulness and mucous gurgling of the left side had much decreased. She slept well, and had some appetite. Ordered—

Decoct. Cinchon. Julep. Ammoniæ, aa ʒvi. ter die. Rep. Pil. Wine as before, and a mutton chop.

Oct. 10th. — She had been going on quietly, was cheerful, sat up in bed, and for a part of several days past had been dressed and sitting by the fire, though her breathing was rendered difficult by motion. She had scarcely any cough, and lay occasionally for the entire night, without distress, upon the left side. An attempt was made to measure the chest. This I have always found to be difficult to effect with exactness, but the immense mammary appendages to the chest in this instance caused much additional obstruction. The right side, upon inspection, seemed to be certainly not larger than the left, and was supposed to be found by admeasurement $1\frac{1}{4}$ inch less. This, however, I believe, could not be trusted, and it was proposed to be attempted at a future time, but as the patient objected, and desired "not to be pulled about," the intention was never fulfilled. She continued for many weeks much in the same state. I saw less of her, in consequence of her physician, Dr. Babington, having resumed his duty, but I ascertained that the symptoms and local signs continued, without much alteration, till about two weeks before her death, when she became more distressed in mind and body, and complained of pain in her left temple. For this a few leeches were ordered, without benefit, and her wine, which had been previously discontinued, was afterwards restored without advantage. She now began gradually and slowly to sink, and her dyspnœa increased very considerably. She complained of pain in the left side, but said it was not severe. On the morning of Nov. 18th, nine weeks after her admission, after taking her breakfast as usual, she was found dead in her bed. She was at first supposed to be asleep, so quietly had she expired.

Inspection, 53 hours after death.—I was not present before the body was opened, and the sides were unfortunately not measured. The head was not opened.—*Thorax:* On the scalpel entering the right pleural cavity, fluid and a little air escaped with great force and noise. Two quarts, at least, of thin cream-coloured fluid were found in the right pleura, and the lung was thereby much compressed towards the spine, and the mediastinum pushed to the left side. The serous membrane, excepting at the apex, where it was adherent, was every where covered with a thick layer of yellowish-white fibrin, which was soft and flocculent externally, but firmer and smooth near the pleura. No aperture was visible in the pleura, nor could any be discovered till the lung was removed entire and inflated under water, when a small pin-hole opening was found, which communicated by a tube of fibrin about a quarter of an inch long, with an irregular cavity as large as a nutmeg close to the sur-

face of the serous membrane. The cavity, situated quite at the lower part of the upper lobe, had a soft, loose, yellow lining, and was entered by a bronchial tube as large as a crow-quill. The surrounding lung, to the size of a pullet's egg, was firm from old pneumonia and tubercles. No other cavity was discovered. The other parts of the lung were scantily sprinkled with opaque tubercles. Most parts were pretty crepitant and distensible by air, and no part was absolutely solid except that around the cavity. Many of the bronchial tubes were largely dilated. The apex of the left lung was adherent and consolidated, from old pneumonia, all activity in which had ceased. As the probable results of inflammation, however, had been left several portions of opaque, white, firm, and even hard, scrofulous matter, as large as peas, in separate and agglomerated masses. The remainder of the lung was affected with slight recent pneumonia. The pericardium was healthy. The heart was rather pale, loose, and flabby; its valves were not diseased, nor were its cavities dilated. In the apex of the right ventricle was a firm mass of leathery fibrin, which appeared to have been formerly hollow, and to have contained fluid which had escaped, and thus allowed of the collapse of the cyst. Other small detached masses were confined by the bands of the musculi pectinati.—*Abdomen:* The stomach was red, tumid, and ulcerated. The liver was large, party coloured, soft, and fatty. The kidneys were firm and coarse, and their tunics adherent.

The history of this case is somewhat doubtful and obscure, as the patient had been supposed to be suffering from hysteria alone before her admission. By whom she had been prescribed for, I could not ascertain, but I distinctly found out that she had not been seen by any of the professional officers of the hospital. What had really been the train of previous symptoms could not be accurately determined, and the period of the escape of air into the pleura could not be defined with any thing approaching to certainty. It might have been five days before her admission, when she was stated to have been seized with sudden and violent dyspnœa; but even upon this point the patient and a constant female attendant varied considerably in their representations. It might have been on the very day of her admission, when the distress was extreme. If the latter supposition was correct, then it is almost certain that pleuritic effusion had previously existed, though not in sufficient quantity seriously to embarrass the respiration, or compress the lung; as, on the day she entered the hospital, she was affected with all the symptoms, excepting pain of the side, which Louis has supposed (but as I conceive incorrectly) always to accompany the escape of air into the pleura. The aperture in the pleura was very small; the cavity in the lung with which it communicated was small also; the lung was comparatively slightly diseased; few or not extensive adhesions existed; the distress and dyspnœa, on admission, were excessive. The aperture, indeed, was so small that it required all the delicacy and perseverance of my friend, Mr. Hilton, even with the aid of the blow-pipe, to detect it. Had not the blow-pipe been employed—still more had not the untiring energy of such an individual as Mr. Hilton been exercised—would not this case have been put down as "a remarkable instance of the secretion of gas by the pleura?" I believe that it most certainly would have been so recorded. The patient probably ultimately died from the serous effusion into the pleura, and possibly might have been temporarily relieved by paracentesis thoracis, had she been considered in a fit condition to undergo the operation.

[To be continued.]

ON THE

STATISTICS OF FEVER IN ST. THOMAS'S HOSPITAL;

WITH REFERENCE TO TREATMENT.

By H. Burton, M.D.

(For the London Medical Gazette.)

[Continued from page 210.]

Day of fever.

In speaking of the termination of fatal fevers relative to the day of commencing their treatment in hospital, I may in the first place remark that the histories of the epidemic fevers which existed in early times, and the numerous records of their more recent occurrence in localities remote from one another, furnish sufficient support to the opinion of the probable continuance of an universal and variable, but constant rate of mortality from this source, and that the healing power of physic is controlled by causes the fatal influence of which can never be entirely obviated by medical art.

But although an uncertain number of fevers must inevitably prove fatal, there is no reason to question the salutary influence of medicine over a multitude of cases which terminate in recovery; on the contrary, ample evidence is afforded of its utility by daily experience, and of the probability of many fever patients having been preserved by timely and judicious treat-

ment. These remarks apply particularly to patients in hospital, where their wants can be properly satisfied, and the requisite attention strictly enjoined to ventilation and cleanliness, but which cannot be insured at the squalid homes of the poor, and amidst the unavoidable privations of poverty. The efficacy of treatment in fevers removed from the pestilential abodes in which they were engendered, to the airy wards of St. Thomas's, is continually evinced by its beneficial results, and in confirmation of its greater efficiency also in the St. John's Fever Hospital at Limerick, I again refer to the "Report" of Dr. W. J. Geary (Dub. Med. Journ. vol. 12, p. 385), in which the average mortality among fevers treated in hospital during five years is stated to have been annually considerably less than the mortality among fevers treated also by Dr. Geary, during the same five years, at the patients' homes. The same author also very judiciously lays great stress upon the importance of the early commencement of treatment in fever, and as far as I have been able to compare the results of his experience with my own, they correspond very nearly with those derived from the treatment of the fevers enumerated in this paper. There can be little doubt, for several reasons, that the influence of the day of commencing treatment ranks high among the various and subtile causes which modify the mortality; and as an index of the progress which the febrile poison has made in raising obstructions to the functional acts of the vital organs, it deserves, as regards prognosis and therapeutics, an attentive consideration. In reference, therefore, to this important topic, I propose to inquire: 1stly, into the influence of the day of commencing treatment, on the rates of mortality. 2dly. Its influence on the duration of fatal cases. 3dly. Its influence on the duration of cases which terminated in recovery.

1stly. Among the 35 fatal cases enumerated in table 1, there were 20 in which a relation was observed between the day of fever on admission and termination; in 14 cases the day of fever was either unknown or the disease had existed above a fortnight, and in one case the patient recovered from fever, and died of a chronic pulmonary disease.

This series would be justly considered too limited to afford satisfactory results, if viewed unsupported by evidence obtained from other sources, but as my results correspond in all essential respects with those deduced from a much more extended series furnished by Dr. Geary, its extent is, I think, adequate to afford, with a near approach to accuracy, a true average relation between the days of commencing treatment and the rates of mortality among the fevers admitted on each day respectively into my wards. As regards the question of critical days in fever, it is worthy of remark, that in Dr. Geary's Report, the mortality is represented to have been greater among the cases which were admitted on the 7th day, than on any previous day; and greatest after the 14th day, among 3208 cases. But the rates of mortality among fevers admitted between the 7th and 14th days varied irregularly with the advance of the disease; the mortality for instance, among patients admitted on the 7th day, was greater than that on the 8th, 9th, 11th, and 14th days; and the mortality on the 12th day, although greater than that on the 7th day, was less than among patients who were admitted on the 10th day of the fever. Hence, no invariable proportion seemed to exist between the daily rates of mortality, and the day of the disease after the 7th day, among Dr. Geary's patients; neither was there any to be observed among my own; but on the contrary, analogous variations were noticed, and in very many cases of fever it was impossible to ascertain within a day or two the exact period at which the disease commenced; hence, as a brief delay of a day or two in commencing treatment after the first week of fever has not been shown to affect its fatal termination in any regular order, I have calculated the average rates of mortality for each week after the following manner. (See top of next page.)

The two foregoing series of ratios do not differ materially from one another, and both of them show that the mortality was least among the patients admitted during the first week, and greatest after the second week of the fever. This close correspondence between two independent series of observations leaves no room for reasonable doubt as to the general accuracy of both; and the facts which they deve-

TABLE VII.

Localities.	FIRST WEEK.			SECOND WEEK.			OVER AND UNKNOWN.		
	Admitted.	Died.	Average mortality.	Admitted.	Died.	Average mortality.	Admitted.	Died.	Average mortality.
St. John's, Limerick .	2186	126	1 in $17\frac{1}{4}$	932	85	1 in 11	88	24	1 in $3\frac{2}{3}$
St. Thomas's, Southwark	134	9	1 in $14\frac{8}{9}$, or 15	137	11	1 in $12\frac{5}{11}$	82	14	1 in 6, nearly.

lope suggest at once the reflection, that had the patients who were admitted during the second week, and subsequently been received into hospital during the first week of their respective fevers, the mortality among the total number would have been considerably less, and many lives saved.

It is by first estimating truly the causes which modify the rates of mortality from fever, that we can hope eventually to reduce them to their lowest limits, and as the virulence of the febrile poison is increased by the neglect of prophylactic measures, and its infecting power consequently augmented, another reason is adduced in favour of the speedy removal of the patient from the vitiated atmosphere of his home, to the well-ventilated wards of a hospital, where appropriate means are taken, by which the diffusion of typhus is checked, and the mortality from it materially diminished.

In pursuing our inquiry as to the influence of the day of commencing treatment on the mortality from fever, and its duration in fatal cases, as well as in recoveries, the agency of organic disease and that of the febrile poison considered as an entity, but without respect to its essential nature, will appear to exercise a strong controlling power which should not be overlooked. To the existence of organic disease, either confirmed before the accession of fever, or caused during its progress, may be ascribed, in part at least, the greater mortality represented on table 3, to have taken place during the two coldest quarters of six years when the inclemency of the seasons, which is experienced by patients who resort to hospitals far more severely than by others in comparatively easy circumstances, was likely to have excited acute inflammations in some of my patients, and have aggravated the infirmities of others. The coexistence of organic disease and recent congestion has been often noticed at post-mortem examinations by different physicians, but my own notes of the morbid appearances observed in bodies of fever patients are scanty, and their defects induce me to supply the requisite information from a copious and lucid description given by Dr. Reid in the Edin. Med. Jour. Vol. 52, pp. 448, et seq., of the lesions observed in 47 bodies dead of a similar fever at the Royal Infirmary, Edinburgh, in part of the years 1838 and 1839, when continued fever was epidemic in that city. Dr. Henderson has given in the same Report, pp. 429, et seq., a detailed description of its symptoms, and as they were chiefly referrible to the brain and lungs, and less obviously to the alimentary canal, the type of fever seems to have nearly corresponded with that contemplated in this paper. In all my own fatal cases stupor was more or less profound, either on the day of admission, or a few days after; the other symptoms were not equally obvious. In three the stupor was profound, and they terminated on the day of admission, or the next; in 16 out of 35 cases, the stupor was associated with great pulmonary obstruction; in three with retention of urine; in three with diarrhœa; in one with vomiting, in another with tympanitis, and in five with severe abdominal pain, which had appeared at an early period of the fever.

In reference to post-mortem appearances, Dr. Reid says (pp. 448, et seq. ibid.), that lesion of the alimentary canal has been comparatively rare in

the fever of Edinburgh for several years, at the time he wrote, and in only 2 cases out of 43 examined by him were the elliptical particles of Peyer very distinctly elevated, and presented any appearance of ulceration, although in 24 they were apparent and distinctly defined. In most cases the blood-vessels of the brain were loaded with blood, and in one half serum was effused within the cranium; the lungs also were either more or less gorged with blood and frothy serum, or consolidated, and the seat of chronic disease, in about 34 out of 44 cases.

I have extracted the above remarks from Dr. Reid's valuable Report, in evidence of the general nature of the lesions which were suspected to predominate in all my cases, and to be analogous to those seen by me in a few; and as the complications on the day of admission varied in my cases, they should be taken into calculation with reference to the influence of the day of commencing treatment on the duration of fatal fevers.

2dly, *Day of fever on duration in fatal cases.*—It is probable that the rates of mortality are modified not only by the coexistence of organic disease with fever, but likewise more especially by the mutable virulence of the febrile poison, and the vital importance of the organ on which its principal action is exerted; and as it is generally admitted that diseases of the alimentary canal accompanied with fever are not so immediately subversive of life as those of the brain and thoracic viscera, there is reason to infer, that when symptoms predominate which are referrible to the abdominal canal, the fever, although ultimately fatal, may linger on for a longer period than where they are referrible to more important organs. And accordingly I think the variable length of the fevers enumerated in the following table may be partly ascribed to these causes, and partly also, though less obviously, to the day on which the treatment was commenced.

In reviewing the preceding results, a

TABLE VIII.

Localities and authorities.	FIRST WEEK OF FEVER.			SECOND WEEK OF FEVER.			THIRD WEEK AND OVER OF FEVER.			ALL PERIODS OF FEVER.	
		Days of average duration.			Days of average duration.			Days of average duration.			
	Fatal cases admitted.	After admission.	From commencement.	Fatal cases admitted.	After admission.	From commencement.	Fatal cases admitted.	After admission.	From commencement.	Fatal cases admitted.	Days of average duration from commencement.
St. Thomas's Hospital, Dr. Burton.	9	7·4	12·6	9	8·1	20·1	—	—	—	24	18·7
London Fever Hospital, Dr. S. Smith.	16	6·1	13·3	31	10·2	20	32	9	29·2	79	22·3
L'Hôpital de la Charité, M. Louis.	7	11	16·3	7	12·3	23·2	—	—	—	52	25·7
L'Hôpital de la Charité, M. Andral.	7	10·4	15·3	7	11·6	22·5	—	—	—	—	—
St. Thomas's and Guy's, and L'Hôpital de la Charité.	—	—	—	—	—	—	10	3·7	24·7	—	—

distinction should be made between the duration of fever after admission, and of that from its commencement, for a comparison between the two in-

tervals will show that the two intervals do not bear any constant or regular proportion to one another; on the contrary, it will be seen that, whilst the utmost difference between the average duration after admission among Dr. S. Smith's cases amounts to only 4 days, the utmost difference between the average duration of them from their commencement exceeded 15 days, and the differences between the two intervals, in the three weekly periods, were respectively 6 days for the first week, 9·8 days for the second, and 20·2 days for the third week. Similar differences, although less in amount, will be observed in the series derived from the three other sources named in the table, and it is also interesting to observe, that notwithstanding the length of the fevers at Paris from their commencement, and which were admitted during the two first weeks, exceeded the length of those treated in London during the same periods of the disease, yet in both cities the fevers admitted in the first week terminated sooner than those admitted in the second week; a correspondence which seems to bear a relation to the question of the "identity or non-identity of the continued fever of France and England," very ably discussed by a contributor to the 12th volume of the Brit. and For. Med. Rev. pp. 294, et seq. It leads also to the conclusion that fatal fevers in general are protracted in proportion to the times at which their treatment was commenced. This anomaly may, I think, be in part ascribed to the variable activity of the febrile poison, and the vital importance of the organ on which its power is chiefly exerted: thus, among Dr. S. Smith's cases there were 54 in which the fever was complicated with cerebral, thoracic, and mixed, and 25 cases chiefly with abdominal disease. Now, without reference to the periods at which they were admitted, I have calculated the average duration of these 25 cases to have been 26·4 days; and that of the 54 cases 20·4 days; hence the difference of 6 days between these terminations may be ascribed, *cæteris paribus*, to the influence of organic lesion, and the virulence of the febrile poison. This inference derives support, also, from the fact that the 9 cases treated by myself in the first week of the disease having been for the most part complicated with cerebral disease only, the average duration of which was only 12·6 days, or 7·8 days less than that of the mixed diseases, and 13·8 days less than that of fever with abdominal disease. Besides, the duration of 12·6 days observed in the cerebral fevers at St. Thomas's, corresponds very nearly with that given by Dr. Reid of 43 cases of fever examined by him *post-mortem* in the Royal Infirmary, Edinburgh, the average duration of which was only 12½ days; and as the fevers described by Dr. Henderson and Dr. Reid were supposed to be similar to those admitted into St. Thomas's, I think the variable duration of fatal fevers should be ascribed to the vital importance of the organ implicated, rather than to the influence of the day on which their treatment was commenced. Upon comparing the symptoms, history, and treatment of the fatal cases in my practice with those of the severe cases apparently similar, but which terminated in recovery, I could not discover any adequate reason why one patient should die and the other be restored to health; and as an analogous obscurity may be supposed to have concealed the relation between cause and effect from other physicians, the variations alluded to cannot, I think, be traced to the nature of the treatment which was adopted. But although it seems to fail in regulating the duration of fatal fever, yet the results represented on Table VII show that the mortality from fever is fearfully increased by delay in commencing treatment; and evidence will presently be adduced to prove that convalescence is established on an average between 5 or 6 days sooner among those who are admitted in the first week, than among those in the second week of fever.

3dly, *Day of fever on duration in recoveries.*—With reference to the object of this section, I have collected the data furnished by my notes of 109 cases of adynamic fever of variable severity which were admitted between January 1837 and May 31, 1838, when the disease was epidemic in the metropolis, and the following arrangement shews the relation between the day of fever, the cases admitted, and its average duration respectively on each. (See top of next page.)

For the sake, also, of verifying and

TABLE IX.

Day of fever when admitted	3	4	5	6	7	8	9	10	11	12	13	14	Over	Total.
Number of cases on each day	3	3	6	7	27	6	10	11	2	3	0	24	7	109
Duration of fever from its commencement	17	18	20	20	22	23	20	25	21	24	0	27	36	

comparing the foregoing results with others deduced from data collected on the decline of the epidemic, I subjoin a second series of 114 fevers, mixed as regards their severity and complications, sex and age, and which were admitted between May 31, 1838, and Jan. 31, 1842.

TABLE X.

Day of fever when admitted	3	4	5	6	7	8	9	10	11	12	13	14	Over	Total.
Number of cases on each day	6	4	7	6	28	11	4	7	5	3	0	25	8	114
Duration of fever from its commencement	14	15	20	23	21	19	25	36	24	22	0	27	35	—

The results exhibited on both tables shew that the average duration of fever increased, although irregularly, with the day on which its treatment was commenced between the 3d, and beyond the 14th days; and that the patients who were admitted on the 7th day recovered nearly a week sooner than those admitted on the 14th day; and between 14 and 15 days sooner than those admitted after the 14th day of the fever. The results are particularly interesting, as proofs of the great importance of commencing treatment at an early period, and, in conjunction with those enumerated on Table VII., they strengthen the inferences before noticed, that the mortality from fever, as well as its duration in recoveries, might be lessened by the timely application of therapeutic measures.

As regards the term "*duration*" of fever which terminates in convalescence, it is proper to remark that hardly any phenomenon relating to the form under contemplation is more variable than the period at which febrile action ceases, and the apyrectic state is established. In explanation, therefore, of the meaning attached to this term by me, I beg to refer to page 206, Med. Gaz. vol. xxxiii., where the manner is described in which the continued fevers of the last six years were for the most part observed to terminate in convalescence: but to avoid ambiguity, I may add here that the increasing desire for food usually corresponded with the gradual disappearance of the febrile symptoms; and that three or four days were allowed to intervene between the day on which they were supposed to have entirely ceased, and that on which the diet was changed; the term, therefore, "duration," in this paper, strictly signifies the day on which the patients were considered by me to be able to digest solid food, after having been restricted to the use of diluents, arrow-root, bread, and beef-tea. The days on which this change of diet was prescribed were marked in my ward-books, and although, perhaps, the change was sometimes delayed unnecessarily, yet these delays were not sufficiently numerous to affect the average results of

treatment represented in the preceding and following tabular arrangements; in all of them the duration of the fever is calculated from its commencement before admission to the day on which this change was made after admission into hospital; and hence the results represent the therapeutic rather than the pathognomonic duration of the disease. The test of returning appetite was also considered by M. Louis as a proof of the termination of the fever in Paris; and at p. 12, t. i. in a foot-note, he observes, "Je mets l'epoque de la convalescence au moment où les malades ont commencé à manger un peu de pain." The regularity which attends the course and duration of exanthematous fevers, such as variola and rubeola, is not so obvious in the continued fever under contemplation, and which my friend Dr. R. Williams justly states, "runs a course of very varied length" (Elements of Medicine, vol. i. p. 25); a length that extends, according to Dr. Elliotson, from one day to eight or ten weeks (Principles and Practice of Medicine, p. 269), and to Dr. Tweedie, from one day to two weeks, or the beginning of the third week (Cyc. Prac. Med. art. Fever, pp. 158, et seq.) The variations are attributed by these, as well as other authors, to different causes, but in particular to the complication of fever with organic disease: and in the Brit. and For. Med. Rev. No. xxiv. Oct. 1841, p. 320, the mean duration of fever complicated with dothinenteritis in 255 recoveries, is stated by Dr. Jackson to have been 22·019 days; but during the epidemic fever at Edinburgh in 1838 and 1839, when dothinenteritis did not generally prevail, Dr. Henderson (Edin. Med. and Surg. Journ. vol. xl. pp. 445 and 446) says the average duration in 28 cases that were bled was $11\frac{2}{3}$ days, and in 24 cases that had wine 15 days, to the commencement of convalescence. In 88 cases treated at Paris by M. Louis between 1820 and 1827, the average duration was much longer, and extended to between 31 and 32 days (Recherches sur la Gastro-Enterite, pp. 468, 469, tom. ii.), a period almost precisely equal to that at which 10 fevers with abdominal complications, described by Dr. Bright (Medical Reports, vol. i. p. 201), recovered in Guy's Hospital during the years 1826 and 1827. But this latter duration exceeds that of 14 mild cases treated by M. Andral at Paris during the same years nearly, and which the latter physician states was only $18\frac{1}{4}$ days (Malad. de l'abdomen, tom. i. p. 330, et seq.)

The above quotations will convey a sufficiently distinct notion of the variable average length of continued fever, and will serve also to suggest the propriety of avoiding any positive expression of opinion as to the exact period at which convalescence will begin in any single case; for although Dr. Holland truly remarks, at p. 6 of his "Medical Notes and Reflections," that errors are, in reference to pathological results, best corrected by numerous and repeated averages," yet the wide latitude between the two extremes of a series constructed in reference to the duration of fatal fever, as well as of recoveries, materially diminish the value of average results of treatment to the practical physician. But notwithstanding the uncertainty which prevails on this point, a nearer approximation to a definite period may, perhaps, be made by allowing for the agency of those causes which have been already noticed as most obviously modifying the mortality from fever, and which may be supposed, with equal reason, to cause a variation in the period at which convalescence begins.

Influence of sex in recoveries.—Under this impression, and with the view in the first place of ascertaining how far difference of sex influenced the duration of the cases treated by me, I have enumerated, in the following table, the days on which respectively, after admission, 144 male and female patients returned to a meat diet, between the 1st June, 1838, and the 31st Dec. 1842. (See Table XI.)

The total numbers of the two sexes were almost equal, and nearly an equal number of each returned to a meat diet about the same periods from the commencement of their respective fevers; the greatest difference occurred among the cases of the second week, in which it will be seen the excess was on the side of the males, and amounted only to 9 between 45 and 36 females; but that difference exceeds the proportional difference between the total numbers of the two sexes by only rather more than 1, and is compensated for by the excess on the side of the females admitted in the fourth week.

TABLE XI.

Periods from the commencement of fever at which 144 patients returned to a meat diet.		Number of weekly returns.		Differences.	Total returns.
		Males.	Females.		
From 4 to 7 days .	First week . .	15	14	+1 m.	29
8 to 10 days	Second week	14	14	0	81
11 to 14 days		31	22	+9 m.	
15 to 21 days.	Third week . .	13	14	+1 f.	27
Over 21 days . . .	Fourth week .	2	5	+3 f.	7
Totals	——	75	69	+6 m.	144

From another calculation, I found the average time, after admission in 1833, at which 29 females returned to a meat diet, was 13 days, or about three quarters of a day sooner than 26 males of the same year and seasons. Sex, therefore, appears to exert only a slight influence over the duration of fever, after admission, in recoveries; and the same remark applies to its agency in fatal fevers, although, on reference to Table V., the proportional mortality among females is represented to have been much less than among males in St. Thomas's Hospital.

[To be continued.]

CONTRIBUTIONS

TO

ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.

Lecturer on Anatomy and Physiology, and Corresponding Member of the French Academy of Medicine.

[Concluded from p. 477.]

Hermaphroditism: a Memoir read to the Royal Society of Edinburgh in 1827 *and* 1828.

Part V.—Conclusion.

I have thus endeavoured to shew, that in the construction of the generative system of organs of the animal kingdom, nature had in contemplation a plan sufficiently comprehensive to embrace all the forms and combinations of organs which the œconomy of any animal, its destination, its habits and mode of existence, its relations to the internal world, and to others, whether congenerous and of the same species, or specifically and generically distinct, might ultimately demand or render essential. But of these modifications there was one, viz. that some animals should carry with them the organs we denominate male and female, and that others should have them distinct. Now in the construction of the whole species the type was uniform as to both sets of organs, and in the construction of the great group of the vertebral kingdom the type in like manner was uniform, and both sets of organs given to all. This superabundance in nature's works, this prescience or forethought of all that could possibly be required in structure, accords better with the other phenomena of the material world—a superfluity, rather than a scarcity. It accords with what we know of the enormous superfluity of the seeds of all vegetables with which the world abounds, and with the numerous remains of rudimentary structures crowded occasionally into the structure of animals whose œconomy is entirely adverse to their developement. This great law, should it ultimately receive the sanction of time, sets aside all those metaphysical speculations on which have been founded doctrines of analogies, and the extraordinary doctrine, that nature, in selecting a type or model for the animal kingdom, had selected the most simple instead of the most complex; thus forcing the human embryo to pass through those gradations, or rather I should say degradations, embracing within them the whole range of the animal creation.

This great step led naturally to the inquiry as to the nature of the rudimentary organs; such as the presence of the swimming bladder of fishes, and the double organs of the proteus and syren, and azolotl, the difficulties in the explaining of which had been got over by a recurrence to the old law,

that all animals were forced to pass through the same laws and structure; and if remains of branchial organs were found in animals whose œconomy ultimately demanded and required a pulmonary system of breathing, it was said that the animals had to pass in their fœtal state through an ichthyological structure, and that this was the reason why rudiments of such organs were present in the adult: but if man were forced to pass through this ichthyological state, it is difficult, if not impossible, to imagine the necessity for fishes having rudiments of pulmonary organs; inasmuch as they can at any period of their existence enjoy a pulmonary system of breathing. Those great observers who have denied that nature ever created any structure purely ichthylogical or ornithological, were undoubtedly correct in the principle; but when it was attempted to be shewn, that out of the same elementary parts nature had constructed both sets of organs, when the pulmonary system was supposed to be repeated in the branchial, then assuredly, like an erroneous calculation in algebra, the deeper and more sweeping the calculation, the further the inquirers diverged from truth. In the determination of the skeleton of the vertebrate animals, I shall take occasion to call the attention of the Society to these great questions, early in the following session.

The definition usually given of hermaphroditism is quite arbitrary: nor do I believe that in the animal kingdom there actually exists any true hermaphrodite accordant with the vulgar definition of this word. Many animals have both sets of organs, but for the perpetuation of the species they constantly require the co-operation of another individual. Cavoline imagined hermaphroditism complete in all respects to exist in certain fishes, but no proofs have ever been fairly brought forward so as to satisfy all doubts*. We dismiss, then, the question as to the possible existence of hermaphroditism in the vulgar sense, by supposing that no such state ever existed in any animal.

Modern laws, I presume, do not recognise hermaphroditism, and yet, by the Roman and French law, as quoted by Bauhin, in his work on hermaphrodites, these beings are required to employ the organs of one sex only. This seems to imply that the compilers of these laws believed in the existence of these compound heterodoxical beings: but we need not, for all this, attach the slightest value to the collective wisdom of legislative bodies, whether Roman or French, for the same statutes recognised the existence of witches and supernatural agents, and enacted laws regarding them!*

But hermaphroditism, even to the extent it is said to take place in fishes, is a condition, as applied to man, opposed to all the existing states of social intercourse, and so deeply affecting all human institutions, that its very rare occurrence in society may be referred to an original law ordaining it to be so; the same which fixed a limited and fixed duration of existence to all living beings, determined that in the vertebral kingdom the sexes should be separate, and even when re-united in one individual, there should not arise therefrom a competency in the individual to render unnecessary the conjunction of the sexes. For very obvious reasons, the whole crane of human society hinges upon a complete disunion of the sexes.

Deviations from natural structures are liable to become hereditary, and thus experiments made on the lower animals might lead to singular results: but still I do not think so; for there is an obstinacy in nature's laws to adhere to certain forms of existence; to certain laws from which she will not, or cannot, deviate. The reasons assigned by Aristotle for the production of monsters are as false as now written: that great man peopled Africa with monsters, which he ascribed to the mixture of different species brought together at the thinly scattered springs of water partially irrigating that arid waste; but enterprise shews us that nothing monstrous exists in Africa, excepting, perhaps, human institutions;

* There are facts, moreover, in the œconomy of the higher organised animals, which oppose the notion of any vertebral animal being capable of exercising both sets of organs, even though possessing both. In those cases of hypospadia which occasionally occur in the ruminals, and of which there is a specimen on the table, the animal seems to have no real female propensities: hence the constant wetting of the wool each time the urine is discharged, because the animal being male does not feel the necessity of assuming the position of the female in discharging the urine, and hence it seems to dribble away, but in fact it does not do so. I do not think it exactly proved that any animal whatever is strictly hermaphroditical, in the sense assumed by the vulgar.

* In a very ancient Hindoo code it is forbidden to offer as sacrifices to Shivas, the blind, the crippled, the aged, the sick, the hermaphrodite, &c.

the works of nature which are found there being beautifully perfect.

The general influence of hermaphroditism over the body is remarkable; but this subject has been exhausted by others. I have placed on the table what may be called a deformed male and female pelvis, as explanatory of the limits set to that influence by causes of which we are entirely ignorant; and thus sometimes the upper half of the body may be completely female, the lower half male, and the whole outline female, with male organs sufficiently developed and active. This influence undoubtedly extends to the intellectual organs, and to the form of the head.

Hermaphrodital appearances are extremely rare in birds, and they have never been observed in reptiles. The destruction of one set of organs—the female, in birds—gives a tendency to male habits; the bird assumes the male plumage. How far this is applicable to human structure has been supposed to be best exemplified in the case described by Mr. Pott. But there is something doubtful in all this; the descent of the ovaria through the rings shewed a leaning towards the male structure: Mr. Pott and his commentators do not seem to have thought of this. Mr. Pott's case is the first, or the only one, perhaps, recorded; his details are extremely imperfect, and, like nearly all his other pathological remarks, merely excite in us a desire to know more. M. Isidore Geoffroy remarks that "these organs (the ovaria) in their development, follow the course of the vasa deferentia in man; it is an anomaly resulting from a real excess of development, and very remarkable for the new proofs it furnishes in support of the analogy of the genital organs in the two sexes." To me these expressions convey no meaning. The genital organs in the sexes have no analogies to each other, but are, on the contrary, diametrically opposite.

I have thus endeavoured to determine the original type of two great systems of organs in animal bodies, in the generative and respiratory; and in this inquiry I trust it has been made manifest that the philosophy of the animal organization, founded on an ideal analogy of organs, cannot be trusted. These doctrines have led anatomists to compare parts with each other, and draw resemblances in organs essentially and always distinct; in a word, they have led to false conclusions. The opinions I have ventured to substitute for them are not contradicted, so far as I know, by any striking anatomical observation. The memoir which I trust to have the honour of submitting to the Society shortly, on the double type of the respiratory organs being at once pulmonary and branchial, together with the determination of the osseous apparatus connected with these organs, will put these doctrines to the test.

CASE OF ERGOTISM.

By James B. Thompson, M.D.

(*For the Medical Gazette.*)

This disease, if disease it may be called, is often met with amongst the natives of the western coast of Africa. It was remarkably well marked in the following case:—

A lad of about eighteen years of age, servant to the brother of Governor Rankin, then residing at the Gambia. It was observed that whenever this boy was in the act of brushing the flies and mosquitos from his master, while at dinner, he dropped off into an apparently sound sleep, and remained fixed in his then position. He was often noticed to do the same when about to get any thing from off the side-board, or in opening a closet in the dining room. It was often amusing, indeed most laughable, to behold him during this period of somnolency. He was not unlike a person going about the house in his sleep. Indeed, there seems to be some analogy between this affection and that of a confirmed somnambulist; but the former cases are more generally followed by serious, sometimes fatal consequences, after a period of years have elapsed. It would appear as if the circulation in the brain was much engaged; death, in such cases, mostly terminating in a form of asphyxia or apoplexy. I am not aware that autopsies have thrown any light as yet on the subject; nor do I imagine we are as yet in possession of the most judicious treatment for such anomalous cases.

MEDICAL GAZETTE.

Friday, January 19, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

ELECTIONS.

THERE is something very disheartening to the sincere lover of truth, in the conflicting statements that attend every subject of discussion and dispute. No sooner are the feelings enlisted in any cause than the power of accurately weighing evidence, of making due allowance for exaggeration or perversion, of liberally constructing doubtful motives, seems to forsake even the most philosophical. There really seems no escape from the mistakes of party but in seclusion and indifference. Yet this neutral course, seemingly so safe and easy, is by no means free from its dangers or its annoyances. Indifference to their interests is the least offence of which, in the eyes of each party, the philosopher is guilty; he is more likely to be suspected by each of positive opposition. Woe to the man who has not early imbibed a prejudice on one side or the other. He is liable to the same kind of rebukes as Sir Roger de Coverley met with, when a boy, in his inquiries for St. Anne's Lane. Parties ran high at the time, and the first man he inquired of asked him, peevishly, who made Anne a saint? and on his dropping the offensive prefix, the next called him "a crop-eared cur, and told him St. Anne was a saint before he was born, and would be one after he was hanged." It may even be doubted whether those who have the means of coming to a just decision on questions of public importance, have a very clear right to remain neuter; and society is not far out, perhaps, when it attributes neutrality to indolence or timidity; or to other causes less flattering than that of a conscientious and dignified reserve, which is warranted by a careful balancing of evidence, and a truly philosophical decision.

There is a kind of neutrality, too, not uncommon, very dangerous to him who adopts it, and very uncomfortable to his neighbours, that, namely, which will not stand the test of provocation, but which is liable, on some slight offence really or apparently personal, to be tempted into the lists which had been quitted, and to lend its aid, at an unexpected period of the contest, with manifest and gross unfairness. "The Pasha of many Tales" interrupts one told by a British sailor, we think, at the words "armed neutrality," and inquires the meaning of the term, which was new to him. He is drily told that the signification varies at different times, but that just now it means "a charge of bayonets."

Perhaps out of all the letters which reach the journalist on such a subject as a contested election, there is hardly one which those who best know the circumstances of the case can entirely approve. The warmth with which the effusion has been moulded has usually left on it some marks of distortion: deficient information, hasty construction, unwarrantable conclusions, characterize nearly all such productions; and although, if they were all printed, the well-informed might gather some more information from their compilation, the uninformed and the misinformed, who want most assistance, would but become more bewildered. A summing up, and an opinion given *ex cathedrâ*, may, however, be expected of the journalist, but an opinion so given is at once set down by those whom it does not entirely favour, as that of a partizan,—one more of the many that ought to be combated.

We may shew a man a column of figures, and tell him the bottom line contains their amount; he may believe us; but only those who have done the sum are quite convinced of its accuracy. Assuming, therefore, that we know exactly the rights of each part of the case, and could if we would give an unexceptionable verdict, let us lay aside as settled, the *matter*, and say a few words as to the *manner* of conducting disputes. The knights of old went about, we learn, as defenders of the right against the wrong, redressing grievances, and settling disputes, by the means then most in vogue for making men think alike; and a vast deal of good they did, no doubt; some capital verdicts they gave, some very just damages they enforced. But besides his general advocacy of the right and the true, each champion rode forth prepared to assert that his own mistress was the most beautiful and most virtuous in the world. This gave plentiful employment in the intervals of great undertakings, and hardly any two of these worthies could proceed together to or from the castle of some murderous giant, without a little private quarrel about the merits of their respective dames. Nine times out of ten an acquaintance began with a battle, and, after a sufficient banging, ended in a warm friendship. Each admired in the other the qualities which he had displayed in the combat, and they loved each other as those only love who have exchanged a beating in a worthy cause with a worthy opponent. But a foul stroke, an unfair advantage, a recourse to sorcery, or any other breach of the laws of honour and chivalry, earned for the recreant who practised it contempt and hatred. Now, as we have all our prejudices and prepossessions, for which we contend as keenly, though not so bloodily, as the knights-errant did for their mistresses, and as life is passed in daily conflict for these prepossessions, and for our several interests, it is above all things important that we should take care, whichever way the battle may go, so to bear ourselves that we may gain and not lose friends in the contest. The smart manner and bold assertions of a zealous committee-man may gain a vote or votes, but do not pay in the end if they damage our reputation, or loosen a private friendship.

One word about committees. We have often wished, when religious parties ran high, that we could get opposing divines to change pulpits occasionally; and it would be a capital arrangement if the most zealous friend of the opposite party were retained in each committee room, to give his opinion on the various notions entertained and expedients adopted. The more fiery the character of this friendly enemy the better; and lest zeal should cool by hearing too much on the other side, he might be changed occasionally, and so kept at a useful temperature, with a proper glow of honest indignation on his countenance. The experiment is surely worth trying*.

DOCTORS' BILLS.

A good humoured letter was addressed to the Editor of the Times, the week before last, by one signing himself Anti*bill*ious, who complains that his friend "Phial" has for the last two years departed from his usual custom of specifying every pill, draught, mixture, &c. supplied to his family, and merely charged "for medicine and attendance, as per ledger — pounds, &c." Anti*bill*ious seems to be a solicitor, for he doubts whether his clients would be content with so compendious an account of the services he has rendered

* There is a plan very much applauded in committee-rooms, but which seems sadly opposed to morality, and even decency. It is called the "neutralizing promises, and consists, in fact, in inducing those who have *promised* their votes to one candidate, to *break their promise*.

for the various six-and-eight-pences which make the sum of his yearly bills, and is quite sure that no butcher, baker, or other tradesman, who should charge in a like manner, would ever be paid.

"A General Practitioner" answers this letter, and is rather angry with the lawyer for classing his old friend "Phial" with the butcher and baker, though the lawyer's own bill had been placed, by implication at least, in the same category. He dwells on the present liberal and expensive education of the general practitioner, and thinks, very properly, that people ought to pay for what the lawyer charges under a separate head, namely, advice and attendance.

But this clearly gives the lawyer the whole benefit of the argument. He does not grudge the amount of his medical bill, or dispute the correctness of his old friend's ledger, but he does wish to know what he has had, or might have had, for his money. The writers of two subsequent letters, "A Looker-on," and "Chirurgus," have between them stated the real remedy for the evil, which is just what common sense points out, namely, that charges should be made for attendance and advice, not for medicine; and that the times when such attendance and advice were given should be accurately specified. We strongly recommend "Old Phial" to adopt this plan; his visiting-book is of course as accurate as his ledger; and his visits may be posted side by side with his draughts; and we would engage that his old friend Anti*bill*ious would rather be reminded of having seen his cheerful face in the house on any given day, than of having had a black, white, or yellow draught sent him; especially as he very candidly owns to having doubts whether all the physic sent to his house was ever swallowed or not.

The writers of the two last letters both lament that the degrading practice of keeping open shops, and selling drugs, should be continued by medical men. There is no doubt this does the whole profession, but especially the general practitioner, much harm with the public. It confounds the real distinction between the educated prescriber and the mere vender of drugs; but the practice of charging for medicine at all, as a remuneration for attendance, does perhaps still more damage, for it raises the importance and increases the profits of the mere druggist; and these very profits induce educated men to open these attractive retail shops, from which the public form their own notions and draw their own inferences, as to the functions, the habits, and the qualifications of "Doctors." We have before said, that we have no faith in public meetings to set these matters right. Let those who feel the evils of the present system, and especially the degradation which it causes, use their private influence and personal example, to promote a temperate and gradual reform.

LECTURE

ON

ABSCESS AND FISTULA CONNECTED WITH THE RECTUM,

Delivered in the Theatre of St. George's Hospital, January 3, 1844,

By Sir B. C. Brodie, Bart.

Gentlemen,—I presume you are all aware that abscesses are very liable to form in the vicinity of the rectum, and that when they are formed they for the most part do not heal spontaneously. You are also aware that the parietes of the abscesses contract, become hard and callous, and that in this stage the disease receives the name of *fistula in ano*.

The disease is one of sufficiently common occurrence in hospital practice, but it is much more frequently met with in private practice. It is very distressing to the patient, and in every way of great interest to the surgeon.

The first questions that present themselves to us are, wherefore is it that these abscesses are particularly liable to form in this situation? and wherefore do not abscesses which are here formed heal spontaneously, like abscesses elsewhere in the cellular membrane? I was accustomed formerly to suppose that the healing of these abscesses was prevented chiefly by the constant action of the sphincter and levator ani muscles. Further consideration, however, and a more mature experience, have led me to believe that this opinion was incorrect. That the action of muscles in the neighbourhood may interfere with the healing of an abscess there can be no doubt; but that it should prevent the healing process altogether seems to be not sufficiently probable, and at any rate the formation of the abscess cannot be explained in this manner.

In order that we may arrive at the real origin of the abscess which forms in connection with the rectum, I must call your attention to what happens in other parts of intestinal canal. The mucous membrane, under a variety of circumstances, is liable to ulcerate. In patients who die of diseased liver, of phthisis pulmonalis, at the end of continued fever, and in several other cases, the mucous membrane of the bowels is found to be ulcerated. In the majority of cases the ulceration does not extend into the muscular tunic; but sometimes it does so, and not only to the muscular tunic, but also to the parts beyond that tunic, and then some of the contents of the intestine escape. If this happens where the bowel is covered by peritoneum, fæculent matter may find its way into the peritoneal cavity. For instance, a little boy seven years of age had symptoms of mesenteric disease, at the conclusion of what was supposed to be a fever. When he seemed to be in a state of convalescence he was suddenly seized in the evening with a kind of fainting fit, during which his pulse could not be felt. After some time, under the influence of stimulants, he recovered from the fainting, but continued low and depressed. On the following day, however, another attack took place, from which he did not recover. On a *post-mortem* examination, I found that there was ulceration on the inner surface of the ileum, and that the mesenteric glands were diseased, as they are in scrofulous children. In one place the ulcer had by a small opening extended through both the muscular tunic and the peritoneum, and a small quantity of feculent matter had escaped into the abdominal cavity. Every one who has had much opportunity of seeing the progress of disease, has met with cases of this kind. But there are other cases, in which both the muscular and peritoneal coats ulcerate, and yet the contents of the intestines do not escape into the peritoneal cavity. Adhesions take place round the ulcerated spot, and the consequence is, that when the ulceration of the peritoneum is complete, the contents escape, not into the abdomen, but into the cellular membrane of the abdominal parietes. For example, a young man, 18 or 19 years of age, who had long been in ill health with disease of the lungs, besides being ill in other ways, was seized one evening, when he was supposed to be rather better, with violent pain in one side, which extended, with considerable tenderness, over the whole abdomen. Two physicians were called in, and they supposed that he laboured under peritoneal inflammation. The symptoms, indeed, were not exactly those which peritoneal inflammation commonly produces, but still they could not explain them so well on any other supposition. These inflammatory symptoms subsided, and some time afterwards I was called in to see him, in consequence of a tumor having formed in the front of the belly. It was an abscess. I opened it, and there came out pus; but besides that there was a good deal of foreign matter, which I was satisfied must have come from the intestinal canal. After this, abscesses presented themselves in several other places, and the patient ultimately died. On examining the body, it was found that there were ulcers at the lower part of the ileum. One of these had extended through the muscular and the peritoneal tunics, but all around the ulcer the ileum had contracted adhesions to the abdominal parietes above the groin. Matter had escaped into the cellular membrane apparently between the layers of the abdominal muscles, and from thence had made its way forward to the part where the abscess was opened.

This patient, I have said, died; but death is not a matter of course under such circumstances. I was sent for to see a little boy who had been supposed to labour under mesenteric disease. When I saw him, there was an abscess near the navel discharging pus and fæculent matter. Attention was paid to his general health; he was kept in a recumbent position, lying on his back (a most essential part of the treatment), and some very simple dressing applied to the wound. The boy ultimately recovered. He was, at any rate, alive two or three years afterwards. In a similar case a boy lived a considerable time afterwards; but after he was taken away from London I had no opportunity of knowing what happened to him.

The part of the intestine in which ulceration is most likely to take place is the lower part of the ileum. It not unfrequently occurs, however, in the cœcum. The abscesses of which you hear in the right iliac region generally have their origin in the cœcum. A young man jumped from a coach, and felt, as he said, something give way in the right groin. He came to London with a tumor there, and, thinking that there was a deep-seated gland suppurating, I advised him to go home, to keep quiet, and apply a poultice. About a month had elapsed from the time when he jumped from the coach, when he sent to me to say that the abscess had burst. It was discharging pus of a very offensive odour, and it was plain that there were fæces mixed with it. He had no bad symptoms for two or three days. I did not tell him the exact nature of the case, for he was a very nervous man, and I thought it would alarm him. Two or three days afterwards, however, having taken a draught of decoction of bark, to his great horror he observed that the medicine came out at the groin. This frightened him out of his wits; and from

that period his nervous system began to give way. He fell into a state of great nervous excitement, and died ten days after the abscess had burst. On examining the body after death, I found an ulcerated opening of the cœcum at the posterior part, through which the fæces had escaped into the cellular membrane, and formed the abscess which had presented itself in the groin. There was a woman in this hospital with an abscess in the groin which was supposed to be connected with dead bone (as indeed is the case with the great majority of chronic abscesses). Perhaps sufficient attention was not paid to the quality of the discharge, but one day, the patient, on taking off the poultice, found in it an intestinal worm (a lumbricus). She ultimately died, and on examining the body we found an ulcerated opening at the posterior part of the cœcum, through which the lumbricus had made its way; and it was evident that this ulceration had been the origin of this abscess. I mention these cases, though they are by no means singular, because the recital of particular cases will often impress an important fact on the mind better than a mere general observation.

Now I believe that this is the way in which abscesses of the rectum are always formed; that originally there is an ulcer of the mucous membrane of the bowel extending through the muscular tunic into the cellular membrane external to it; and I will state my reasons for that opinion. It is a matter of some interest as a question in pathology, but it is of great importance, as I shall shew presently, in connexion with surgical practice.

First, there is the analogy of such cases as I have already mentioned, in which abscesses are formed external to the bowel from ulceration of the mucous membrane. It is admitted by every one that in the greater number of cases of fistula in ano there are two openings, one communicating with the interior of the bowel, and the other externally. But for my own part, I have no doubt that the inner opening always exists. I scarcely ever fail to find it in the living person when I look for it in the proper place, and seek it carefully; and when I have had the opportunity of examining the appearances connected with fistula in ano in the dead body, I am not aware that I have ever failed to discover the inner opening in a single instance. And this offers a very reasonable explanation of the formation of these abscesses, and it is almost impossible, on any other hypothesis, to understand why suppuration should take place in the cellular membrane in the neighbourhood of the rectum more than in the cellular membrane elsewhere. The pus contained in an abscess near the rectum scarcely ever presents a healthy appearance; it is always dirty-coloured, offensive to the smell, and sometimes highly so. Occasionally you find fæculent matter in it quite distinct. There is no reason why an abscess, simply because it is formed in the cellular membrane, should smell of sulphuretted hydrogen, but there is a good reason why that should be the case if it be connected with the rectum, and with the infiltration of its contents into the cellular membrane.

It is easy to understand, on this ground, why these abscesses do not heal. A small quantity of mucus from the gut, or of fæculent matter issuing into the cavity of the abscess, is sufficient to prevent the healing process from going on.

I have more than once, in the living person, been able to trace the whole progress of the formation of one of these abscesses. For example, I was sent for to a lady who complained of some irritation about the rectum. On examining the bowel, I found that there was an ulcer at the posterior part, and I ordered her to take Ward's paste *(confectio piperis nigri)*, or cubebs pepper; I cannot recollect which. About a month afterwards she again sent for me; there was an abscess, which I opened, and the probe passed into the outer opening at once entered the gut, through the ulcer, about which I had been originally consulted.

The primary opening of the abscess is generally very small indeed. But sometimes it is of considerable size; perhaps large enough to admit the end of the little finger. The inner orifice is, I believe, invariably situated immediately above the sphincter muscle, just at that part where the fæces are lodged before they are finally expelled.

I conclude that the most frequent cause of abscesses of this kind is the lodgment of hard fæces in the bowels. By the straining which is requisite to expel them the mucous membrane is torn, or abraded in one part, and then the continued contact of the fæces causes ulceration. At a subsebuent period straining again takes place, the muscular tunic gives way, and a little of the fæces escapes into the cellular texture. Foreign bodies impacted in the rectum are sometimes the cause of abscess. I was called to a gentleman who complained of great irritation about the rectum. I concluded that he had internal piles, but on the following day he complained still more, and on examining the rectum, I found a hard substance sticking in the mucous membrane. It proved to be a piece of apple core which he had swallowed the day before. If this had not been extracted, it would have occasioned an ulcer, some of the fæces would have passed through the opening, and the probability is that the apple core would have been found in the cavity of the abscess. I was sent for to see another gentleman who was ex-

ceedingly ill with a large abscess in the front of the anus. He had a brown or rather a black tongue, attended with severe typhoid symptoms. I opened the abscess freely, let out a quantity of putrid offensive matter, and on introducing my finger into the abscess I found a long fish bone lying across, with one end stuck in the gut and the other in the abscess. The fish bone had traversed the rest of the intestinal canal easily enough, but when it met with the obstruction caused by the sphincter muscle it penetrated the tunics of the rectum, and a little of the fæces escaping by its side formed a putrid abscess. Persons who are otherwise in certain states of ill health are especially liable to abscess and fistula of the rectum—those, for example, who labour under disease of the liver or disease of the lungs. The reason is, they are especially subject to ulceration of the mucous membrane. In these cases I imagine that the ulcer begins in the mucous glandules.

The first formation of abscess about the rectum is not in general attended with very urgent symptoms. The patient has a sense of bearing down, fulness, and weight. Thinking that he has got piles, he puts his hand by the side of the anus, and finds a little hardness. By and bye this hardness increases, the parts become tender, there is pain in passing the evacuations, and perhaps some difficulty in doing it. As the abscess advances the pain becomes greater; at last it bursts, and a quantity of matter is discharged, which is almost invariably offensive, dark-coloured, and putrid. Occasionally, however, the disease is so insidious in its formation that the patient knows nothing about it till the abscess has given way. A physician in large practice in London, more than twenty years ago, became very ill, languid, and almost unfit to discharge his professional duties. He was under the necessity of going home in the middle of the day, in consequence of headach and an incapability of exertion, and lie down for an hour, before he could finish seeing his patients. One afternoon, having sent away his carriage, and intending to walk home, he felt something give way and burst into his small-clothes. It was a putrid abscess, which had formed near the anus, and it ended in a fistula, for which he went through an operation, and got well.

During the formation of these abscesses there is sometimes little or no constitutional disturbance, while in other cases there is a great deal of it. I believe that the constitutional disturbance depends chiefly on the quality of the pus, and that again on the size of the opening. If there be an opening of such a size as will allow a considerable quantity of feculent matter to escape, the pus is of a very putrid quality, and the more putrid the pus the more offensive it is to the smell, and the more poisonous to the patient's system. The sulphuretted hydrogen in which the pus abounds, sufficiently explains its poisonous quality. Very urgent symptoms indeed does such a collection of putrid matter sometimes produce. I was called in to see an elderly gentleman in the neighbourhood of London, with the late Dr. Blick, of Walthamstow. The patient I will not say was in *articulo mortis*, but he looked as if he had not long to live; I should hardly have supposed 24 hours. On inquiry into the history of the case, I learned that he had had a fistula by the side of the rectum for many years. He was afraid of an operation, and had suffered the disease to go on. The external orifice occasionally closed for a time, but in a few days it opened again, and the matter escaped. Some two or three months before the time at which I was called in to see him, the outer orifice of the fistula closed, and from that time there had been no discharge. At first he experienced no inconvenience from it, but by and bye there was a sense of pressure, and bearing-down of the rectum; his health became disturbed. At last typhoid symptoms came on, and, as I have said, he appeared to be almost dying. I examined the parts externally, and I perceived that the external orifice of the fistula was firmly cicatrised. I introduced my finger into the gut, and above the sphincter muscle I could feel a tumor on one side, evidently an immense collection of matter. With the fore-finger of one hand in the rectum I introduced a lancet with the other hand, and ran it up to the point where the matter was collected. Not only the shoulders of the lancet, but the whole blade, was buried before matter escaped, and then there came away a little of a putrid odour. I dilated the opening with a probe-pointed bistoury, and then there escaped a pint of matter so putrid and offensive that the whole house was poisoned by it. The smell could hardly have been worse if a nightman had emptied his cart into one of the rooms. The patient was better directly. Fortunately, although there was a very free incision, there was no bleeding, and he recovered without a bad symptom. This took place many years ago, and the gentleman died lately of another complaint.

I have told you that the inner orifice of the abscess is always just above the sphincter muscle. It may be that the abscess terminates just at this spot, but in the greater number of cases it extends higher up, sometimes one or two inches; nay, I have known a probe to pass four or five inches up the pelvis, apparently into a large cavity on the side of the rectum. These are cases of some interest, of which I shall have to speak to you again.

The external orifice of the abscess is generally in the skin, at a little distance from the anus. Sometimes it seems to pass through the substance of the sphincter muscle, and at other times to open externally to it. The abscess may burrow, and it may then be two or three inches away from the anus, or even farther still. In some cases there is no external opening at all, and that may happen in two ways. I saw a gentleman who had an ulcer of the rectum; it was at the posterior part, and as broad as a four-penny piece. I saw him some time afterwards, and there was a considerable discharge ftom the rectum, but no external opening. I introduced my finger into the rectum, and found that this broad ulcer had made a large cavity, in which matter was lodged, behind the rectum. There was no external opening, because the sinus was so large that the matter, as fast as it was formed, found its way out by the gut, and therefore did not collect in any large quantity. In other cases, where there is no external opening, there are two internal ones, and they are formed in the following manner: first, a small opening through which the fæces and mucus were originally infiltrated into the cellular membrane, and then another larger one, formed by the abscess bursting into the gut afterwards. When you examine a patient in this condition, you find a discharge of pus from the inside of the rectum, and none from the parts on the outside. This is commonly termed a *blind fistula*. The discharge in this case is generally not quite constant, in consequence of the opening made by the bursting of the abscess into the rectum being at times partially closed. At these periods the matter collects by the side of the bowel, and you may feel it near the anus through the skin. At other times the orifice allows the matter to escape into the rectum, and then the external tumor disappears.

In some instances there is a simple abscess, and a simple sinus, but in others you find the disease very complicated. The matter does not easily get to the surface, and it burrows in different directions; there is a sinus in this direction, and a sinus in that; and they sometimes extend to the middle of the nates, or even to the opposite side of the rectum. In these cases where there are several sinuses, and where the disease is complicated from the burrowing of the matter, it will sometimes happen that there are two internal openings, but in the greater number of cases there is only one, which is connected directly with one sinus and indirectly with the others. This is a matter of great consequence to bear in mind as connected with surgical treatment. Where there are several sinuses each burrowing in a different direction, the patient is always subjected to some degree of inconvenience. The matter lodges sometimes in one place and sometimes in another, and wherever it lodges it occasions pain. There is, perhaps, an attack of shivering, and then the matter escapes; it afterwards lodges in another place, and produces another attack of shivering, and thus, in these complicated cases, the patient is continually tormented, both locally and constitutionally.

I now come to the consideration of the treatment of these cases. Why is it that the abscess does not heal? I dare say it may arise partly from what I formerly considered to be the cause; namely, that it is an unfavourable locality for healing on account of the muscular fibres of the part being always in motion. The levator ani muscle and the sphincter are constantly drawing the parts asunder, and consequently do not allow of their contraction. That, however, as I have already observed, is not a sufficient explanation. There is an internal opening to the abscess, and every now and then a small portion of fæces, or of mucus, becomes infiltrated into it, and the same cause which produced the abscess in the first instance prevents the healing afterwards. If the inner orifice could be closed, the case would go on well, and this sometimes, though rarely, happens. I saw a patient who had an abscess by the side of the rectum, and to whom I recommended an operation, but for some reason or other he put it off. He went about for a considerable time with the abscess open, but at last I saw him again with the abscess healed, and it had been closed so long, and the parts seemed so sound, that I have no doubt it had healed soundly. I conclude that the inner orifice had closed spontaneously, and the escape of the feculent matter being prevented, there was nothing to prevent the abscess from contracting and healing like an abscess situated elsewhere. There is a medicine which is now in the Pharmacopœia under the name of *confectio piperis nigri*, which was originally sold as a quack medicine called *Ward's paste*. It is composed chiefly of black pepper and elecampane, and it had a reputation for curing fistula. I believe that it sometimes does produce this effect, and undoubtedly it is very useful in cases of piles, and of ulcers of the rectum unconnected with fistula. The *modus operandi* is probably this; the black pepper mixes with the fæces, and passing down the canal it becomes a local application and a stimulant to the mucous membrane. In this way it is often beneficial to persons that suffer from disease of the mucous membrane after dysentery. In a case of *fistula* we may suppose that the black pepper stimulates

the ulcerated opening of the rectum so as to cause it to contract and cicatrise, and this being done there is no reason why the abscess should not heal also.

But you cannot place dependence on such a mode of treatment as this; for where it may cure once it fails a great number of times. The disease, however, may in general be cured by a very simple operation. In explaining the objects and the nature of the operation, I will first take the simplest case, one in which there is a fistula just by the side of the sphincter muscle, and only a single sinus. The first thing to be done is to find the inner opening. I do not say that you will always succeed in finding it, and certainly not always on the first trial; but you will rarely fail to find it at last if you look for it in the right place. I used frequently to fail formerly, and for a very sufficient reason—I did not know where the opening was to be found. Remember that it is situated, not at the upper extremity of the *fistula*, but immediately above the sphincter muscle. Then I should observe, that the common probe, being quite round, turns round in the hand, and is not a convenient instrument for the examination. For this operation I use the probes which I now shew you, and which are made by Philp and Whicker, in St. James's Street. There is a flat handle, which affords a perfect command of the instrument. From the handle it gradually becomes smaller towards the other extremity, which is made like that of a common probe. Then there is a groove to within about an inch of the smaller extremity, so that it is a probe and a director at the same time.

Now, to find the inner opening, let the patient lean over a table where there is a good light, and having an assistant to hold the nates asunder. You then introduce the fore-finger of one hand into the rectum, bearing in mind that the opening will be found close to the sphincter muscle. Generally speaking you will feel some little irregularity where it is situated. You are then to introduce this instrument (which, as I have stated, is both a director and a probe) into the external opening, and with the assistance of the finger in the rectum, taking care to use no force, you feel for the inner opening first in one direction, then in another, until at last the end of the probe slips into it. This part of the operation must be performed with a very light hand; with which precaution a little practice will enable you, in the very great majority of cases, to find the inner opening easily enough. You will know when the probe has gone through the opening by its coming in contact with the finger. If you do not find the opening on the first day, defer the operation until a subsequent day, when you may perhaps succeed better. It is well worth your patient's while to submit to this delay, the operation being very simple when you can find the opening, and the result being very uncertain when you cannot. The inner opening having been detected, and the probe being in contact with your finger, you bend the round extremity of it, and bring it out at the anus. The part towards the handle is then seen projecting from the outer opening, and the other part from the anus. The whole of the soft parts which lie between the two openings are now to be divided; and for this purpose I find a pair of curved knife-edged scissors to answer better than a bistoury, which stretches and tears the parts before it cuts them. I may observe, that the incision required is for the most part very trifling—not more than an inch or an inch and a half in length—yet, in making it, a great part of the sphincter muscle is generally divided.

Having completed the operation, all you have to do is to prevent the cut edges growing together. You have converted the fistula into an open sore; some of the fæces may go into it, but they do not lie and lodge there, and there is nothing to prevent the parts from granulating and healing from the bottom. All that you have to do is to dress them lightly between the cut edges, so as to prevent the latter from becoming united. As soon as these are skinned over, you may leave off the dressing, and the rest of the healing process goes on without your aid.

But suppose that the fistula has been burrowing in the direction upwards, and you find that it extends high up by the side of the rectum, what course must you then pursue? Formerly I imagined that it was necessary to lay open the whole of such a sinus into the rectum; but it is a frightful thing to do so. You do not know what large vessels you may divide. It is seldom that there is much bleeding by dividing merely the parts between the inner and the outer opening; or even if there should be, the pressure of the finger and a bit of lint stops it directly. But I remember a case where I divided a fistula some way up by the side of the gut, and bleeding ensued so that the whole of the colon was filled with blood. It is true that the hæmorrhage stopped, and the patient got well; but still he might have died. The bleeding, in this instance, went on insidiously; but if you really know that it is taking place, you do not know how to stop it. The bleeding vessels are so situated that you cannot secure them by the ligature; neither can you make pressure on them in any efficient manner. I am satisfied now, and have long been so, that a division of the whole length of a sinus, where it extends above the inner orifice, is quite unnecessary. Upwards of twenty years ago, when I was

first getting into practice, I had a patient with fistula, which I divided, or at any rate thought I had done so; but one day, when examining the parts with a probe, I found a continuation of the sinus running up several inches by the side of the gut. It appeared as though one side of the rectum had been completely dissected from the neighbouring parts; but there was a good opening for the discharge of matter at the lower part, where I had divided the lower portion of the fistula. I doubted what I ought to do in such a case, and I called in the late Mr. Cline. I said to him, "I really am afraid that, if I were to divide the whole of this long sinus, the patient might die of bleeding." He replied, "you are quite right; and more than that, I do not think it is necessary. I would leave it alone." I acted on this suggestion, and the patient got well without any trouble. I have since seen other cases of the same kind, which I have treated in the same manner, and with the same success.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, January 9th, 1844.

THE PRESIDENT IN THE CHAIR.

Case of the Removal of a Diseased Ovarium, terminating fatally on the seventh day after the operation. By J. M. GREENHOW, Esq., Surgeon to the Newcastle Infirmary and Eye Infirmary. [Communicated by Sir B. C. BRODIE, Bart.]

THE patient was aged 29 years, and married. For four years she had suffered from frequent discharges of blood from the uterus. Eighteen months ago—that is, six months after her marriage—the swelling in the abdomen commenced at the pubic region, and rapidly increased till it attained a large size; her strength all the while declining from the constant uterine discharge. The abdomen was tapped, and only a little blood escaped; but afterwards nearly a quart of dark-coloured fluid was discharged daily from the wound for about a fortnight. Before the operation of removing the tumor, which was performed September 3d, the abdomen was about as large as at the full period of utero-gestation; there was fluctuation in one or two parts, but generally the tumor was firm, and felt as if divided into separate masses. The incision reached from a little below the ensiform cartilage to near the pubis. Several adhesions existed at different parts, the principal one being to the omentum, which was spread over the upper part of the right side of the tumor. These adhesions were divided with the bistoury, and then the tumor was raised, with some effort, owing to its great size and weight, from its situation. Double ligatures were passed through its pedicle, and firmly tied; and this part being divided near the tumor, it was liberated from its attachments, and removed. Two arteries bled freely, one in the divided omentum, and the other in the pedicle; upon these being secured, the wound was brought together by sutures and adhesive plaster, and a bandage applied.

The operation was well borne by the patient, although she vomited several times towards the end. The quantity of blood lost did not exceed six ounces. The symptoms which followed were chiefly great retching and vomiting, constipation of the bowels, quick pulse, tenderness and distension of the abdomen; and she died on the morning of the seventh day. On the post-mortem examination, the folds of the intestines and the omentum were found glued together by recently effused lymph; there was inflammatory redness, with points of ulceration near the pyloric orifice of the stomach. The uterus was healthy, but its cavity was lined with a vascular membrane like the decidua. The morbid growth had been attached to the left broad ligament. On examining the tumor, it was found to weigh twelve pounds seven ounces, and to be more than two feet in circumference. Its surface was smooth, and of a pale colour, resembling that of the skin. With the exception of a few cysts containing a yellow fluid, the general mass was composed of a dense and vascular cellular structure, with a number of small cells or cysts pervading its substance. The author concluded by making some remarks on the case; he directed attention particularly to the disease found in the stomach, which he considered had an important influence in leading to the fatal termination; and thought, on the whole, that the result of the case did not offer a strong argument against resorting to a similar operation in such cases.

Case of Extirpation of an Ovarian Cyst. By BRANSBY B. COOPER, F.R.S., Surgeon to Guy's Hospital.

The patient was aged 32, and married for four years, without having children. She had suffered at different periods from dysmenorrhœa and leucorrhœa. Five years before her admission her abdomen became greatly enlarged, and, having consulted the author, he considered the case to be one of ovarian tumor, and proposed to draw off the fluid from the cyst, and then remove the cyst by a small opening in the abdomen. But this plan was not carried into effect. She was afterwards tapped on two different occasions, when about three gallons of straw-

coloured fluid were discharged each time. When she applied at the hospital, earnestly soliciting to have the operation of removing the tumor performed, her abdomen measured about three feet and a half in circumference. Mr. Cooper resolved to perform the major operation. An incision was therefore made through the abdominal parietes, from the ensiform cartilage to the pubis. A few adhesions to the tumor were met with near the point where the trocar had entered in tapping; these having been divided, the cyst was dislodged and brought out through the wound, when the pedicle connected with the right ovary came into view. A double ligature was passed through the pedicle, and both threads having been tied, the pedicle was divided between the cyst and the ligatures. The left ovary was examined, and found to be healthy. The wound was then brought together by sutures and strapping, and a roller applied round the abdomen. There were some attempts to vomit during the application of the ligatures, but otherwise the patient bore the operation well. A minute record was given of the daily condition of the patient subsequent to the operation; but it is sufficient to say that distinct symptoms of peritonitis soon appeared, and the patient died on the seventh day, without any indication of the system rallying.

On the post-mortem examination, lymph was found effused extensively over the abdominal parietes and viscera, uniting them in many places together. A small piece of omentum was enclosed in the ligature applied to the pedicle. The uterus was large, tumid, and of a dark colour; and a soft fungous tubercle, pronounced, after microscopical examination, to be malignant in its structure, was found on its fundus. The cyst which was removed was of an oval form, and at its superior and anterior part there was a collection of compound cells. Its weight was 32 pounds.

The author concluded by making some general observations on the operation. He drew attention to the peculiar kind of inflammation which followed, and was inclined to think that it was excited more by the presence of the ligature applied to the pedicle, and left in the wound, than to the extensive incision. He also noticed the fact of a tumor of fungoid structure having been found growing from the substance of the uterus, and thought that this was interesting as illustrating the views of those pathologists who believe ovarian tumors, consisting of cysts, to be malignant in their nature, and as bearing on the question of the propriety of removing such tumors by operation.

LETTERS ON THE NERVOUS SYSTEM OF THE GRAVID UTERUS,

ADDRESSED BY

MESSRS. PAGET, LAWRENCE, STANLEY, SKEY, SIR BENJAMIN BRODIE, AND DR. GULLIVER, TO DR. ROBERT LEE, AFTER EXAMINING HIS DISSECTIONS.

To the Editor of the Medical Gazette.

SIR,

MAY I request of you the favour to print in your journal the following letters, which have been sent to me by different eminent anatomists, who have recently examined my dissections of the nerves of the gravid uterus.

I remain, sir,

Your obedient servant,

ROBERT LEE.

4, Saville Row, Jan. 15th, 1844.

"St. Bartholomew's Hospital,
"December 19, 1843.

"My dear Sir,—After the minute examination of your preparations of the nervous system of the gravid uterus which you permitted me to make, I examined your descriptions and Mr. Perry's delineations of them. Both appear to me remarkable for their accuracy.

"With regard to any doubt whether the structures which you have dissected be, as you have described them, nerves and nervous ganglia, it is chiefly by these following facts that I feel convinced of the truth of your account:—

"1. That there is a visible and orderly continuity between the well-known hypogastric and sacral nerves and the most minute and remote of the nervous cords which you have displayed. 2. That these cords, like those of larger size, have such an appearance of being nerves, as could not, I am sure, be imitated by dissections of any other known structure. 3. That the ganglia which you have found are like those of other parts of the sympathetic system, and have distinct nervous cords passing to and from them. 4. That many of the minutest, as well as of the larger, nerves are evidently associated with blood-vesssls. 5. That the nervous system displayed is such an one as the pregnant uterus, from its known structure and functions, might be expected to possess.

"I think that your statements are proved by all the evidence to which it is possible, in the present condition of science, to attain; and I beg to add my congratulations to those which you have already received, on your having, by a truly admirable perseverance and dexterity, made one of the most

important anatomical discoveries of this century.—Believe me, my dear sir,

"Very truly yours,

"JAMES PAGET.

"*Dr. R. Lee.*"

"Whitehall Place, Dec. 28th, 1843.

"My dear Sir,—I have carefully examined your dissections of the nerves of the gravid uterus on various occasions; and I continue to believe, as I did in the first instance, that the structures you have succeeded in displaying are ganglia and nerves; while I am satisfied that your figures and descriptions are perfectly correct. The extraordinary and interesting spectacle you have set before us is so entirely novel, that some hesitation might very probably be felt in arriving at a decided opinion on the subject; yet this augmented size of nerves and ganglia is only analogous to the increased development of blood-vessels in the gravid uterus, with which we have been long familiar: probably a corresponding change might be found in the absorbing system, if it were submitted to the same kind of patient investigation which you have bestowed on the nerves.

"The considerations which have led me to form the conclusions above mentioned are exactly the same as those so clearly stated by my colleague Mr. Paget; I have, therefore, only to add that I entirely agree with what he has written to you on the subject; remaining, my dear sir, yours very faithfully,

"WILLIAM LAWRENCE.

"*Dr. R. Lee.*"

"Brook Street, Jan. 8th.

"My dear Sir,—In reply to your question with what impression I came from the examination of your dissections of the gravid uterus, I can have no hesitation in stating my opinion to be that your dissections do satisfactorily display the uterine nerves and their ganglia. Looking to the arrangement, connections, and relations with the blood-vessels, which the filaments and intumescences present, I cannot think otherwise of them than that they are the uterine nerves and ganglia.—Believe me to be, my dear sir,

"Yours sincerely,

"EDWARD STANLEY.

"*Dr. R. Lee.*"

"Grosvenor Street, Jan. 6th, 1844.

"My dear Sir,—I have much pleasure in complying with your request that I would state the result of my impressions on viewing your dissections of the impregnated uterus.

"I see no reason to doubt the correctness of your views, viz that the immense network which you have so industriously investigated on the surface of the uterus is composed of true nerves and nervous ganglia. To my judgment they present all the visible characters of nerves, and appear to be in direct communication with the pelvic branches of the sympathetic.—I am, my dear sir, very truly yours,

"F. C. SKEY.

"*To Dr Robert Lee.*"

"14, Saville Row, Dec. 29, 1843.

"My dear Sir,—I have carefully inspected your preparations exhibiting the nerves of the gravid uterus, and I can find no reason to doubt the correctness of the statements which you have published in the Philosophical Transactions.—Yours truly,

"B. C. BRODIE.

"*Dr. R. Lee.*"

"Hyde Park Barracks, Jan. 12th, 1844.

"My dear Sir,—I have read your papers in the Philosophical Transactions, on the ganglia, and on the other nervous structures of the uterus, and carefully examined the preparations which you exhibit as vouchers for the facts you have announced.

"Your descriptions and plates appear to me to be executed with remarkable fidelity.

"I cannot doubt but that the structures which you have shown by dissection are really nerves and nervous ganglia, because their fibres are clearly shown to be continuous with the sympathetic and with the sacral nerves, and because I do not believe that any ingenuity in the art of dissection could show such a regular continuity between the nerves and fibres of elastic tissue, or that this tissue could be made to imitate the nerves and nervous ganglia displayed in your preparations.—I am, my dear sir,

"Very sincerely yours,

"GEORGE GULLIVER.

"*Dr. Robert Lee.*"

COLLEGE OF SURGEONS.

To the Editor of the Medical Gazette.

SIR,

I SHOULD be averse from obtruding upon your readers anything which had merely reference to myself; but as much has been said respecting the various provisions of the new charter of the College of Surgeons; and having during a series of years transmitted to the GAZETTE information upon points of practice which I thought likely to be useful, I may, perhaps, be permitted to avail myself of its medium to remark upon the omission of my name from the list of Fellows, which I conceive (I hope without any undue self-appreciation) to be an instance of unfairness in the estimation of claims, being a member of fifteen years' standing, known in the profession, the author of one of the Jacksonian prize essays (On the Compara-

tive Advantages of Lithotomy and Lithotrity), and of other works, on account of which most of the principal continental medical societies have paid me the compliment of conferring upon me their honorary diploma.

As far as I am individually concerned, the insertion or omission of my name would be to me a circumstance of little moment, and, in fact, I did not think about the matter, until my attention was accidentally directed to it on my arrival in town a few weeks ago, when I was recommended to submit my name to the consideration of the Council. Having done this, and afterwards perceiving in the list the names of several gentlemen some years my juniors, unconnected with any public institution, and who have not, as far as I am aware, any superior claim, I cannot but consider that many others must likewise have just grounds of complaining that, in many instances, a degree of partiality has been exercised, not in accordance with justice, or with the views of those by whom the power of selection was conferred.

I am, sir,
Your obedient servant,
EDWIN LEE.

Chester Street, Jan. 13, 1844.

TAUNTON AND SOMERSET HOSPITAL.

To the Editor of the Medical Gazette.

SIR,

I BEG to state for the special information of your correspondent, Dr. J. B. Badeley, of Chelmsford, that sixteen* fully qualified gentlemen have announced themselves as candidates for the office of House-Surgeon and Apothecary to the Taunton and Somerset Hospital, agreeably to the advertisement which has twice appeared on the "fly-leaf" of your valuable journal, and that the greater number of them sent in their applications, and testimonials of qualification, *prior* to the *second*† appearance of this said advertisement. Now, whether these gentlemen have been seduced into this act, by which, according to Dr. Badeley, they "will disgrace themselves and their profession," by the distant prospect of the "munificent salary," or whether they have been actuated thereto by some other wiser and more generous motive, I shall leave them to fight out with the Doctor; but this much I may say, were Dr. Badeley as well acquainted with the real state of our much-overstocked profession as he appears to be with the "terms and wages of a servant out of livery," I am quite sure he would cease to express himself so severely with respect to an appointment, which is *at least some thing better* than his letter of the 9th ultimo would make it appear. The terms of the appointment are, salary £50 per annum, with board at the matron's table, and washing and lodging in the house." Or in other words, board and lodging (consisting of two private furnished apartments,) and all other necessaries free of expense, with the addition of a clear salary of £50 per annum.

Now, Sir, it appears to me, that such an appointment may in all fairness be set down as equivalent to an ordinary income of at least £130 a year, and calculated to make the holder of it better off in a pecuniary point of view, and far more independent, than the great bulk of the hardly-worked and ill-paid juniors of our profession, or the half-pay veterans of the Army and Navy. Moreover, I would suggest to your correspondent, whether he does not think it possible that to most young men who have just completed their medical studies, the holding, for a few years, such an appointment as I have described—and such I will maintain the house-surgeoncy of the Taunton and Somerset Hospital to be, with the constant opportunity it must afford for collecting additional observations, and acquiring experience and confidence in the treatment of disease, would not prove a far wiser and more advantageous introduction to private practice than the usually-resorted-to office of assistant to some general practitioner, a district in a Poor-Law Union, or a surgeoncy to some vessel bound for India or Australia.

So much with respect to the applicants: and now a word or two with reference to the Governors of our hospital, against whom the wrath of Dr. Badeley seems, after all, to have been chiefly directed. As one, then, of the committee upon whom the duty of arranging the terms of the house-surgeoncy devolved, I beg to say that the sum of £50 was not fixed upon at random, nor in haste, but after a careful comparison of the number of beds with the amount of salary paid in thirty or forty provincial hospitals, when it was found that about a guinea per bed was the average rate of payment to the resident officer (for some hospitals, "Heu miserabile dictu," do not afford even £50 *a year!*); while with us the salary is of a higher rate, as may be seen by reference to the advertisement. But I would, in conclusion, assure Dr. Badeley that the sum of £50 was not determined upon from a desire to

* One of them is a highly intelligent graduate in medicine of the University of Edinburgh, in addition to his other qualifications.

† This advertisement appeared a second time in consequence of the Secretary having been originally instructed, viz. at the General Board, held on the 25th October, 1843, to insert it twice in each of the Medical Journals, and the Times newspaper, which order was never rescinded.

adhere rigidly to the spirit of any such averages merely, or in indifference to the feelings and labours of the future resident officer, but was taken as a *just* rate of payment—just as far as the average rate of such payment is considered, and just with reference to the limited funds of the hospital. The Governors, professional and non-professional, would have infinitely preferred giving a salary of £100 to one of £50: but the fact is, Sir, we humble folks in Somersetshire have a great respect for a certain homely saw, which declares "honesty to be the best policy," and therefore we like to make our *honesty* keep pace with our *munificence*, believing it wiser and better to be FIRST *just*, and THEN *generous*.

I have the honour to be, sir,
Your obedient servant,
CHARLES HAYES HIGGINS,
Surgeon to the Taunton and Somerset Hospital.

Taunton, Jan. 8, 1844.

To the Editor of the Medical Gazette.

SIR,

DR. BADELEY'S letter to you will be best answered by the fact, that not less than fifteen qualified candidates have applied for the office of house-surgeon to this hospital, many of whom possess the highest possible testimonials both professional and personal, and several of whom have actively and laboriously canvassed the governors for the appointment during some weeks past.

The hospital is not opulent, and the governors are not able to do as they would wish to do in fixing for the present the salary of this important office. But, in seeking the appointment, respectable members of the profession doubtless have an eye to the opportunities of study and practice which it will afford, as well as to the maintenance which it offers.—I am, sir,

Your obedient servant,
WILLIAM PRICHARD, *Sec.*

Taunton, Jan. 8, 1844.

CAUTION RESPECTING THE QUALITY OF SURGICAL INSTRUMENTS.

To the Editor of the Medical Gazette.

SIR,

Now that the utility of Lallemand's operation of cauterising the prostatic portion of the urethra is generally acknowledged, and the correlevant experience of British surgeons is likely to render it one of frequent application, I beg to submit to your readers a caution with regard to the instruments they employ.

Three or four years ago, I had occasion to adopt this practice in a case in which it answered my most sanguine expectations. While projecting the stylet, some drops of fluid flowed from the end of the catheter, which stained my fingers of the usual dark colour of Nit. Argent. Within a quarter of an hour I cleaned the instrument thoroughly, and laid it aside. About a year thereafter, I had occasion to employ it again. While examining the stylet previous to use, I found that the temporary application of the nitrate of silver had rendered it almost as fragile as the pith of a rush; it broke, on the application of the slightest force, into fragments of an inch in length. Had this occurred while the *porte caustique* was in the prostatic portion of the urethra, I leave your readers to imagine the consequences. The instrument was the production of a respectable maker, who, unfortunately, like too many who assume the name of "surgical," was utterly ignorant of the science to which he ministered. He no doubt thought that he had honourably fulfilled his bargain by making the *ends* of the stylet of pure silver; the intermediate portion was of most villainous *German*.—I remain, sir,

Your obedient servant,
M.D.

LONDON AND PROVINCIAL HOSPITALS.

To the Editor of the Medical Gazette.

SIR,

A PARAGRAPH has appeared in most of the London papers (in the Morning Post and Times of Saturday last) headed "Town and Country Practice," which I enclose for your insertion, if you think any thing so silly worthy of a place in your valuable columns*.

Therein is pourtrayed one of those "rare" instances of success in that *extraordinary*, *difficult*, and uncommon operation, yclept reduction of dislocation of the humerus (of what kind does not appear). This case is one of so valuable a nature that I think it is the bounden duty of that eminent surgeon, Mr. Fergusson, whose case it was, or the "astonished" Mr. Steel, or the "apparatus bearing" Mr. Roberts, to publish forthwith the whole details of the interesting and novel operation to an admiring world, for the benefit of hospital and all other surgeons, and the "Colchester ones" in particular, "that this triumph of London hospital practice over provincial practice may be an additional inducement to the benevolent to support that public medical metropolitan

* We think one extract which our correspondent gives will be sufficient.—ED. GAZ.

institution known by the name of King's College."—I remain, sir,

Your obedient servant,

WHAT NEXT?

P.S.—We have just had a most wonderful case of that novel operation, phlebotomy! which I think of publishing forthwith in the Times and Morning Post.

STATISTICS IN MIDWIFERY.

BY DR. METCALF.

PREMISING that the cases which are the subject of the succeeding remarks all occurred prior to the year 1839, I now proceed with the analysis of 300 cases of labour and delivery, upon which I attended as the accoucheur.

I. *The* 300 *cases of delivery gave birth to* 302 *children.*

II. *Of the duration of labour.*

The following table gives the duration of labour in hours; thus 1 woman was delivered in 1 hour, and so on:—

Hours in Labour.	No. of Women	Hours in Labour.	No. of Women.
1	1	24	56
2	1	25	1
3	1	27	1
4	7	28	2
5	3	29	1
6	25	30	7
7	5	32	1
8	15	33	1
9	1	36	14
10	8	40	2
11	4	42	1
12	85	47	1
13	5	48	1
14	3	50	1
15	6	56	3
16	2	60	3
17	4	65	1
18	8	66	1
19	1	67	1
20	7	69	1
21	1	72	1
22	1	85	1
23	3	90	1

The two most lengthy labours, those of 85 and 90 hours, were both cases of deformed pelvis, the sacro-pubic diameter being very greatly reduced. In one case, that of 85 hours, the child was expelled by the natural efforts, without the aid of art. The other was delivered by lessening the head and the aid of the blunt hook. As this was the only case of instrumental delivery, it will be seen that the use of instruments occurred only once in 300 cases. Whether this proportion be great or small, compared with the practice in this country, I have no authority for determining.

III. *Presentation.*—The following table comprises all the different presentations; thus in 286 children the vertex presented, and so on:—

Presentation	No. of Children.
Vertex	286
Face	1
Face to pubis	1
Both feet	3
Foot and knee	1
Breech	3
Funis	2
Placenta	1
Not known	4

By the foregoing table, it will be seen that the natural presentations, allowing the four cases not known to have been preternatural, were 94.7 per cent. of the whole number, leaving only 5.3 per cent. for all presentations other than the vertex.

The *face presentation* occurred in a rapid labour, and gave no trouble in the delivery. There was nothing in the case worthy of note, save that I was sorely puzzled for a while to make out the presentation. The child's face was very livid, and did not assume its natural colour for some days.

The *face to the pubis presentation* occurred in a long and tedious labour. It was the first case to which I was called, after I came to this town, and was a miscarriage in the eighth month of utero-gestation occasioned by the brutality of a drunken husband: complicated as it was with a prolapsus of the funis, and stranger as I was to the practice of midwifery, as well as to the people among whom I had located myself, this case, as may well be supposed, gave me no inconsiderable uneasiness. It, however, terminated well; the child, from the prolapsus of and pressure upon the umbilical cord, was lost, but the mother had a speedy recovery.

Of the *three presentations with both feet*, two were lost after the descent of the child as far as the head. In the first case I was not called until after a midwife had exhausted her skill, if not her strength, upon the delivery, and the child was found quite dead upon my arrival. The delivery was completed without any difficulty, and the patient soon recovered. The other occurred in the early part of my practice, and with a fair trial, except the abscense of the uterine contractions, I did not succeed in accomplishing the labour until the child was dead. Perhaps, but for certain vague fears of a dislocated neck, or having a child born minus a head, I might have accomplished the delivery in season to have preserved the child. As it was, however, I was too late, and I could plainly distinguish those convulsive motions,

described by authors, as preceding the death of the fœtus. The remaining case was delivered with but little aid, after a labour of twenty-four hours.—*American Journal of the Medical Sciences.*

PAINFUL AFFECTION FROM CUTTING THE WISDOM TEETH.

Having seen several cases of severe inflammation of the gums and the other soft parts surrounding the under wisdom teeth or dens sapientia, at the time of cutting those teeth; soon after I commenced the practice of dentistry (about 1820, and having also been a great sufferer in that way myself previously to my studying medicine,) I was led to seek a remedy for that painful affection: this inflammation is sometimes so great as to produce extreme pain at the junction of the jaws, and so much swelling and soreness of the surrounding soft parts (and extending to the throat) that the patient is hardly able to open the mouth, so as to give the physician an opportunity of even seeing the parts affected.

In such extreme cases I have used the depleting remedies both general and local with good effect; but my object at present is to show how to prevent such cases, or their recurrence, by pointing out their causes and applying the remedy at time.

The cause of this painful affection, when in its extreme cases, arises generally from the upper wisdom tooth having cut through the gum first (before the under wisdom tooth of the same side) and passing so low down as to rest on the lower gum, before the under wisdom tooth begins to cut through the gum; the upper wisdom tooth in some cases being from an eighth to a fourth of an inch lower (or longer) at its cutting (or grinding) point than the molares that is next to it. Now it will be readily perceived, that the first move of the lower wisdom tooth to cut through the gum (or any food or other substance pressing thereon, or the cheek or soft parts folding over or between the teeth) will produce irritation and inflammation which is aggravated by pressing the jaws together, and when the soft surrounding parts are once swelled they will frequently press forward over the jaws or tooth, so as to be pressed on when the mouth is closed, thus continually irritating the inflamed parts.

In some cases I have cut off the whole of the gum covering the top of the under tooth, with great advantage; but occasionally the tooth is so very far back, that the flesh back of the tooth and at the side, will press over the under tooth, and still continue to be pressed upon or mashed, when the jaw closes so as to produce great inflammation of the surrounding parts, extending to the throat, and in some cases accompanied with great stiffness of the joint of the jaw. In all such cases as above, the upper wisdom tooth should be extracted as soon as possible, and the cure will soon be completed, and the recurrence ever after prevented, and the under tooth be freed from difficulty in arriving at its proper situation.

The above plan of cure I would recommend with great confidence, as I have seen a number of persons that had been occasionally sufferers for years, from the above affection, though they had been attended by some of the best physicians and dentists in this country, and some in Europe: one gentleman, an European, told me that his case had cost two hundred dollars in physicians' fees, and loss of business of at least a thousand dollars. This case as well as others was readily cured by extracting the upper wisdom tooth, and the use of some mild astringent and mucilaginous wash for the inflamed parts. In those cases the upper wisdom teeth are located so very far back as not to be considered a loss from extraction.—*Dr. Gunnel, in American Journal of Dental Surgery.*

SPINA BIFIDA TREATED SUCCESSFULLY BY REPEATED PUNCTURES.

The tumor in this case was seated over the upper part of the sacrum, was about three and a half inches in diameter, and rose above the surface of the surrounding integument about two inches. The covering of the tumor was not healthy skin, but a peculiar thin membrane of a reddish colour traversed by numerous vessels like varicose capillary veins. The healthy integument formed a hard line at its point of union with the covering of the tumor. The tumor was punctured on the 17th, 20th, 21st, and 30th of October, with an iris knife, and from an ounce to four ounces of clear serous fluid escaped each time. The fluid was allowed to escape by drops—"at the rate of about three drops in a second; about a third, however, was always left behind. The escape of the fluid generally produced a sinking of the anterior fontanelle of the skull, but no bad symptom followed. After the last tapping the child became fretful and slightly feverish, the sac of the tumor became inflamed, and the child was observed to keep her left leg drawn up, and cried when it was touched. Slight spasms of the muscles were also observed, and tendency to

syncope whenever the head was raised. The tumor was kept wet with a spirit lotion, and gentle laxatives were given: the inflammatory symptoms abated, she returned to the country with her parents, and when seen two years after the operation, it was found that the fluid in the tumor had disappeared, and that a mass of indurated and corrugated integument covered the site of the tumor. The child was healthy.—*New York Journal of Medicine.*

CAUTERIZATION OF THE WOUND THE MOST EFFICACIOUS MEANS OF

PREVENTING THE OCCURRENCE OF HYDROPHOBIA.

M. Dupuy related to the Academy of Medicine, the history of a case where a person bitten by a mad dog escaped hydrophobia by having the wound freely cauterized. At the same meeting was related the fact, that, at Martinique, eighteen individuals were bitten by mad dogs during one year, that seventeen of these had their wounds freely cauterized and did not afterwards suffer, but that the eighteenth, who did not submit to this operation, was seized with hydrophobia. M. Leroux of Dijon has also published, as the result of his experience, that in that town all those who had been bitten by mad dogs, and had their wounds freely cauterized, have escaped, whilst all those who were not so treated have fallen victims to hydrophobia. —*Journal de Pharmacie*; and *Edinburgh Medical Journal.*

SPURIOUS SAFFRON.

We have received information from several sources respecting the existence in the market of a spurious saffron, which has been offered at a very low price. In texture and general appearance it is like genuine saffron, of rather a dark colour, the light yellow filaments being absent. It imparts no colour to spirit or water, and we believe it to be saffron from which the colouring principle has been extracted.—*Pharmaceutical Journal.*

ADULTERATION OF BLUE PILL.

At the last pharmaceutical meeting, Mr. Mowbray incidentally stated that he had lately met with a sample of blue pill, in which stearine had been used in dividing the mercury, and substituted for a portion of the conserve of roses, a little otto of roses having been added to give it a flavour.—*Ibid.*

BOOKS RECEIVED FOR REVIEW.

Lessons on Chemistry, for the use of Pupils in Schools, Junior Students in Universities, and readers who wish to learn the Fudamental Principles and the Leading Facts. By William Balmain.

On the Nature and Treatment of Tic Douloureux, Sciatica, and other Neuralgic Disorders. By Henry Hunt, M.D.

Mr. Braithwaite's Retrospect of Practical Medicine and Surgery; vol. viii. July—December, 1843.

Glossology: or the Additional Means of Diagnosis of Disease to be derived from Indications and Appearances in the Tongue. By Benjamin Ridge, M.D. M.R.C.S.L. &c.

Diseases of the Lungs from Mechanical Causes. By G. Calvert Holland, M.D. &c.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, Jan. 4, 1843.

William Emmerson, South Shields.

Thursday, Jan. 11, 1844.

C. P. Symonds, Great Yarmouth. — E. J. Wright, London.—G. Hammond, Dover.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, December 30, 1843.

Dropsy, Cancer, and other Diseases of Uncertain Seat	108
Diseases of the Brain, Nerves, and Senses	168
Diseases of the Lungs and other Organs of Respiration	285
Diseases of the Heart and Blood-vessels	25
Diseases of the Stomach, Liver, and other Organs of Digestion	56
Diseases of the Kidneys, &c.	9
Childbed	4
Paramenia	0
Ovarian Dropsy	1
Disease of Uterus, &c.	3
Arthritis	0
Rheumatism	2
Diseases of Joints, &c.	3
Carbuncle	0
Phlegmon	0
Ulcer	1
Fistula	1
Diseases of Skin, &c.	0
Old Age or Natural Decay	54
Deaths by Violence, Privation, or Intemperance	19
Small Pox	16
Measles	25
Scarlatina	47
Hooping Cough	28
Croup	4
Thrush	7
Diarrhœa	7
Dysentery	2
Cholera	1
Influenza	8
Ague	0
Remittent Fever	1
Typhus	23
Erysipelas	7
Syphilis	0
Hydrophobia	0
Causes not specified	18
Deaths from all Causes	933

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, JANUARY 26, 1844.

ON PNEUMO-THORAX:

AN ESSAY,

Read (in part) at the Physical Society of Guy's Hospital,

By H. M. Hughes, M.D.

One of the Assistant Physicians to the Hospital.

[Concluded from p. 503.]

Case XI. — *Pneumonia — Emphysema — Pneumo-thorax — Pericarditis — Adhesion of the diaphragm.*

J. B., a tall, thin, but strong man, with light hair and eyes, by trade a baker, was admitted into the hospital December 8th, 1836. Four years before he had suffered from cholera, and a year after had an attack of inflammation of the chest, for which he was bled, and from which he speedily recovered. From that time he had enjoyed good health till about ten days previously to his admission, when, after exposure to wet and cold, he was attacked with cough, pain of the chest, rigors, and an inflamed and swollen state of the feet; for which he had been under medical treatment, but had not been bled. On admission his countenance was flushed and anxious, and the pupils dilated; his tongue was moist and white, and the skin cool. He complained of pain of the right side and shoulder, which was not increased on pressure. He had a distressing cough, accompanied with some expectoration of thick and very tenacious mucus; the pulse was 78, labouring, but not hard. In the lower posterior and lateral portions of the left side mucous and crepitating rattles were audible. They were also present, but less distinctly, over the inferior and middle portions of the right side posteriorly. The respiration was free on both sides anteriorly.

Ordered—V.S. ad ℥xiv.; Pil. Antim. Opiat. fort. c. Hydrarg. Chlorid. gr. ij.; Statim. post venæsection. et vespere repetend. si opus fuerit.

9th.—He was much relieved by the bleeding, and had passed a comfortable night; countenance greatly improved; complained of pain above the left clavicle; pulse 86; more free expectoration, small in quantity, pneumonic, mixed with bronchial mucus. Bronchophony and crepitation heard over the lower part of the left lung posteriorly. The blood was cupped and buffy.

Ordered Pil. Antim. Opiat. c. Hydrarg. Chlorid. gr. ij. 6ta quâque horâ c. Haustu. Jalep. Ammon. Acetat. et Vin. Antimon.

The next day he was so much better that the pills were ordered to be taken at bedtime only, and the draught to be taken as before. He continued to improve, so that on the 14th the pills were altogether omitted; but on the 21st, having complained of pain of the left side, he was ordered to be cupped, and was quite relieved by the operation.

On the 24th he had a troublesome cough, with watery mucous expectoration, and muco-crepitation was audible in both lungs posteriorly; pulse 110, rather sharp; bowels confined; skin perspiring; tongue clean and moist.

Ordered—Pil. Hydrarg. gr. j.; Ext. Hyosciam. gr. j.; Pulv. Digitalis, gr. j. M. ft. Pil. ter die sumend. Rep. Haust.

His cough was relieved the next day, and the pills were omitted the day after. He continued to be occasionally troubled with a return of the cough, being alternately better and worse, till January 10, 1837, when in consequence of pain, and the sudden supervention of tubular breathing in the right side, he was ordered again to be bled, and to resume the medicines prescribed the day after his admission. He was again relieved; but on the 14th the operation was thought to be again necessary; the pills were changed for Hydrarg. Chlorid. gr. j.; Ext. Hyosciam. gr. vj. 4tâ quâque horâ, and a mixture prescribed containing Tr. Digi-

talis ℥viij., for which was substituted, on the 19th, Mist. Cretæ, in consequence of relaxation of the bowels, together with a pill composed of Ext. Conii and Ipecacuanha for his cough.

The daily reports of the case are long, and would perhaps appear tediously prolix; I therefore pass to that of January 31st, when it was stated that he had passed a very restless night from great dyspnœa and difficulty of expectorating sputa, which had increased in quantity. He perspired profusely; was much emaciated, and had flushing of the cheeks; the pulse was 140, and small. The right side was exceedingly dull on percussion; and upon admeasurement was found to be an inch larger than the left. The ribs passed more horizontally outwards than natural, and were scarcely moved upon inspiration; the intercostal spaces were manifestly widened, but not bulging. Respiration was scarcely audible, and very distant, in the part affected.

February 3d.—Countenance much shrunk; breathing greatly oppressed; pulse very feeble and small; tongue clean; he had been delirious, and got out of bed during the night. A splashing noise was now for the first time heard on shaking the body; but no part of the side was discovered to be abnormally resonant on percussion. Dr. Davies' grooved needle (it having been previously introduced between the 6th and 7th ribs anteriorly without effect), was now passed into the chest between the 9th and 10th ribs posteriorly. A little serous fluid alone escaped. A small hydrocele trochar was afterwards used. Several ounces of sero-sanguineous fluid, coagulable by heat, slowly flowed through the canula, till it was introduced to its full extent, when there escaped in jets corresponding with the respiration, and much more freely than before, a large quantity of sero-purulent fluid, in which floated albuminous flakes. Six pints and a quarter were thus withdrawn, and the patient expressed himself as being much relieved. He then became faint, and the canula was withdrawn. The edges of the wound were drawn together by plaster, and a bandage applied around the chest.

Beef-tea and brandy were now taken; and subsequently a sedative draught was administered.

In two hours and a half after the operation, the expression of countenance had improved; the pulse was less contracted, and he felt better. He had a little sleep at short intervals, several times in the recumbent position, but in the evening the respiration was more hurried, and he was very restless; pulse 120, small, and feeble; skin cool. He was supported with beef-tea, isinglass, and wine; and was ordered to take a narcotic draught at night, and some ammonia if required. The next morning he still appeared relieved, having slept three quarters of an hour on two occasions during the night. The cough was less troublesome, and the expectoration scanty; pulse 120, very small; respirations 46; amphoric breathing was now distinctly audible on the right side, and puerile respiration on the left side of the chest, and the sounds of the heart were heard on the right of the sternum. The bowels had not been moved for three days; the urine was scanty, with a copious deposit of the lithates. During the afternoon he became very restless, and awoke, after ten minutes' sleep, with spasmodic dyspnœa and "risus sardonicus," which recurred three or four times before eight o'clock in the evening, when he expired. It was remarked that notwithstanding the large amount of fluid in the right pleura, the liver could on no occasion be felt below the ribs.

Inspection, 30 hours after death.

Chest.—The right pleura pulmonalis was very firmly adherent anteriorly to the parietes of the chest, inferiorly to the diaphragm, and posteriorly to spine and adjoining ribs, so that on removing the sternum it was necessary to detach the lung from the ribs anteriorly before the cavity of the empyema could be reached. On separating the adhesions which connected the lung to the fourth or fifth rib, a quantity of gas escaped. The cavity thereby opened into the sac of the pleura contained besides air about two pints of thick purulent fluid. The pleura was lined with a thick firm layer of fibrin, which was curiously arranged in parallel ridges to the intercostal spaces, like sand left by a retiring tide. The lung contained no tubercles. Though much compressed, it contained in some parts a little air, and was in other parts fleshy and œdematous. No opening was discovered in the pleura, but the investigation was not made with the blow-pipe under water. The aperture was not improbably concealed by the dense albuminous coating which encased that portion of the membrane which was in contact with the effused fluid. A separate and defined collection of sero-purulent fluid existed in the fissure separating the upper from the middle lobe of the lung, but in every other part the fissures were obliterated by old and firm adhesions. The diaphragm was greatly deformed, the pleura covering that portion of it which adjoins the inferior false ribs having contracted firm adhesions to the costal pleura, and thereby formed a boundary to the empyema. Below this it was not adherent; it thus preserved a small separate serous cavity made up of phrenic and costal pleura alone, which was free from purulent effusion. Towards the median line,

being also firmly adherent to the base of the lung, it was put upon the stretch by the pressure of the fluid above, and consequently deflected downwards. It thus formed a double layer of muscle and serous membrane, so that several square inches were removed from contact with the liver on its abdominal surface. The phrenic peritoneum was in apposition with itself, or was merely covered with a little plastic effusion, over the extent of surface thus curiously doubled up and projecting into the cavity of the chest; but beyond this it became re-adjusted to the convex surface of the liver. The left lung was glued to the thoracic parietes by some old pleuritic adhesions, the two lobes being partially joined together by well-organized false membrane. The costal pleura, with this exception, was healthy. The anterior edge of the upper lobe of the lung was somewhat rounded by emphysema, and near the apex anteriorly was a circumscribed indurated portion of lung, the size of a crown piece, extending about an inch into its substance. It was of a pale greyish colour, airless, unyielding, and apparently recently hepatized. The posterior portion of this lobe was tough, and upon being divided a quantity of frothy serum exuded from it. The bronchial tubes were not dilated. The lower lobe was scarcely so permeable by air as the upper, with the exception of the superior and posterior edge, which was tolerably healthy. The thick posterior portion upon section allowed the escape of a large quantity of serous fluid mixed with some which was more viscid and puriform, but was, notwithstanding, generally crepitant. The pericardium contained about two ounces of yellowish slightly turbid fluid, and near the apex of the heart were seen a few delicate bands of imperfectly organized lymph. The serous membrane itself was injected in some parts, and was universally rather opaque. The heart was rather large.

Abdomen.—The liver was large and myristicate, and its acute margin was of a very dark colour. No other morbid appearances were observed.

This protracted, severe, and perplexing case, for the recorded facts of which I am principally indebted to the notes of Messrs. Oldham and Cooke, who were successively clinical clerks at the period, has many remarkable peculiarities. Among the most striking, are the strange adhesions and duplicature of the diaphragm, which were probably the products of the most distant disease, and may possibly be ascribed to the inflammatory affection occurring some years before. These adhesions of the diaphragm to the ribs and to the whole of the base of the lung effectually prevented the descent of that muscle, and the consequent protrusion of the liver downwards and forwards by the fluid accumulated in the pleura, and consequently deprived the observers of one of the most common characteristic signs of empyema of the right side, according to the representations of Dr. Stokes. My own observation in other cases has not, however, induced me to place so high a value upon this sign as it has been supposed to possess by that gentleman.

Another remarkable peculiarity was the firm adhesion of the lung to the anterior parietes of the chest, which, together with those connecting it with the diaphragm, and the ribs adjoining the spine, prevented the total collapse of the organ; so that, notwithstanding the large amount of fluid and gas, the lung in some parts remained pervious to air and crepitant even to the last. Herein the case forcibly illustrates the statements made in a former part of this paper in reference to the preservative influence of adhesions in cases of pneumo-thorax, and resembled a case related by Laennec, in which the chest was similarly punctured, but no fluid evacuated, in consequence of similar adhesions of the lung to the costal pleura. At what time air escaped into the pleura could not be correctly determined, as no decided symptoms characterized the occurrence. But as the expectoration is said to have increased on January 31st, and Hippocratic succussion was first noticed on February 3d, it is probable that it took place a few days only before the patient's death. As no aperture was found in the pleura, this case may be supposed to favour the notion of the formation of gas by the decomposition of the effused fluids: but to this opinion are opposed the facts of the fluid withdrawn by the trochar being destitute of disagreeable odour, and the occurrence of amphoric breathing after the operation. I have not myself the slightest doubt that with the expenditure of a necessary amount of care and trouble in the investigation of this case, the examination of which, as it was actually conducted, occupied a very long time, the opening would have been discovered.

CASE XII.—*Phthisis—Pneumo-thorax—Empyema—Death after nine weeks.*

(Very beautifully drawn up by my young friend Mr. Weston, now in India, and reported almost entirely in his own words.)

J. S., aged 32, a rather emaciated man, of sallow complexion, with dark hair and eyes, by occupation a labourer, was admitted into the hospital, April 3d, 1839. He had been accustomed to work hard and drink freely, sometimes as much as two gallons of beer a day. His mother had died of phthisis, but the rest of his family had enjoyed good health. Sixteen years ago he suffered from ague, and he had since had three attacks of

rheumatism. For the last nine or ten years (the first two-thirds of which period he spent near Chichester, and during the last third had been working in the Dock-yard at Woolwich) he had been subject to cough, which for the last twelve months had been much more frequent, and accompanied with increased expectoration, dyspnœa, gradually progressive emaciation, and perspiration upon waking in the morning. While in nearly the same condition as in months passed, he was, during a violent fit of coughing three weeks ago, suddenly seized with severe pain in the lower part of the right side of the chest, accompanied with great dyspnœa, which lasted for three or four hours. At the expiration of this period he felt a little easier, though not free from pain and shortness of breath. Thus he continued till the next morning, when he awoke with pain as severe as before. Some internal medicines were administered, and a blister applied, which produced a mitigation, but not a cessation, of his suffering, which had continued more or less ever since. The expectoration, which before was copious and muco-puriform, had since been trifling, but it had been, once or twice, streaked with blood. On these occasions only had he ever noticed any blood in the sputa. Before his present attack he never tried to lie upon the right side, as he was accustomed always to lie upon the left; "but during the whole of his present illness he has found it impossible so to lie." For the last five weeks he had been unable to lie even upon the left side, and had consequently kept upon his back. The breathing, except at the onset of the malady, had not been shorter than it was before. During the last week or ten days he had perspired at night more profusely than usual, but it did not appear that he had had any distinct hectic paroxysms.

Upon admission, he complained chiefly of pain in the lower part of the right side of the chest, increased upon pressure. His cough was only occasional, and his expectoration rare and scanty. The breathing did not appear much oppressed—respirations twenty-six in the minute; the pulse was regular, small, easily compressed, 120 in the minute; the skin was cool and rather harsh; the tongue moist, but slightly furred; the bowels open.

Physical signs.—In the recumbent position, the lower two-thirds of the right side of the chest were much too resonant on percussion. The upper third of the right side, and the whole of the left side, yielded a natural resonance. On applying the ear or stethoscope over the lower two-thirds of the right side, no respiratory murmur was heard; but amphoric respiration and metallic tinkling were audible, with occasional metallic resonance of the voice, and cough. At the upper part of the right side, at a spot just below the clavicle, there was cavernous respiration and very marked resonance of the voice; and around this spot there was muco-crepitation. On the left side of the chest, anteriorly, the respiration was puerile, especially over the upper half of the lung; below it was accompanied with a little cooing murmur. When the patient sat up in bed, the lower two-thirds of the right side, anteriorly, still sounded too resonantly on percussion; and in the middle third amphoric respiration and metallic tinkling were still heard. The upper third of the lung afforded the same signs as when he was lying down. Posteriorly, the entire chest sounded naturally resonant on percussion, except at the lower part of the right side, which was rather more dull than natural. At the lower third of the right side there was absence of respiration; in the middle third amphoric respiration, metallic tinkling, and metallic resonance of the cough; and above the spine of the scapula increased resonance of the voice, cavernous respiration, and muco-crepitation. On the left side the respiration was puerile, and at the upper part accompanied with muco-crepitation. Succussion caused a decided fluctuation of fluid within the right pleural cavity. The fluid was not only heard distinctly to splash against the parietes of the chest, and a metallic tinkling to follow the splash, but the agitation of the wave, caused by the succussion of the contained fluid, was distinctly felt by the hand, and by the patient himself. Upon admeasurement there was no appreciable difference found between the two sides of the chest. The heart was heard to beat in its natural position, and nothing morbid was observed respecting it, with the exception of its action being too rapid. The liver was not felt below the ribs, nor was the spleen perceptibly enlarged. Ordered—

C. C. lateri dextro ad ʒx. Julep Ammon. Acetatis c. Vin. Antim. Potassio Tart. ʒss. 4tâ. quâque hora.

The pain of the side was removed by the cupping; but I find no other circumstance worthy of record in the progress of the case till his death on the 5th of May, six weeks after his admission to the hospital, and nine weeks after the supposed occurrence of pneumo-thorax.

Inspection, 24 hours after death.

The body was considerably emaciated. The head was not opened. *Chest:* The right pleura pulmonalis was superiorly connected with the parietes by a few old adhesions. The pleura was in other parts covered with a thick, soft, and whitish albuminous layer, and contained about 24 oz. of sero-purulent fluid. The remaining space not occupied by the greatly contracted lung was filled with gas. The lung was reduced to the size of a very

large orange, and had in several parts small vomical cavities and tubercles in various stages. On its anterior surface were three small rounded openings connecting as many small vomicæ and bronchial tubes with the cavity of the pleura. On the left side old adhesions almost entirely obliterated the pleural cavity. The lung was, in most parts, sprinkled with tubercles, and contained in the upper part a few small cavities filled with dirty purulent fluid. The larger bronchial tubes were greatly obstructed by purulent mucus, and the smaller tubes were much dilated. The pericardium contained about one ounce of serum, but, together with the heart, was otherwise healthy. *Abdomen:* The liver was large, congested, and granular; the spleen was also large and firm. The kidneys were simply congested, but their tunics were unnaturally firmly adherent. The stomach, and the small and large intestines, were healthy.

In the preceding case is presented a fair example of pneumo-thorax in its more common form, the accession of which was well marked; and the general symptoms and physical signs accompanying the progress of which were exceedingly characteristic, and correctly reported by Mr. Weston. The lung, though containing several small cavities, was adherent to the parietes only to a small extent, and, as was indicated by the small size to which it was reduced, was not much consolidated. Hence the space admitting the collection of air in the pleura was comparatively large, and hence the symptoms occurring when the accident took place were comparatively severe. But as the apertures, though small, were three in number, and were also round and free from obstruction, and therefore admitted of the free egress from, as well as the ingress of the air to the pleura, the distressing symptoms were not of long continuance. Caused by the sudden change of the circulation, and accumulation of blood on the right side of the heart, in consequence of a large portion of the respiratory organs becoming, in a great measure, inefficient for the purpose of aerating that fluid, they gradually diminished as the circulatory and respiratory organs became slowly adjusted to each other. No *accumulation* of air occurred, or, while the openings continued unobstructed, could occur in the pleura. The side was not dilated; the heart was not displaced; the liver was not protruded; the operation of paracentesis would necessarily have been useless. The man, indeed, was generally able to walk about the ward, and converse with his fellow-patients, and sank at length more from the effects of phthisis than of pneumo-thorax.

In the preceding pages I have said scarcely anything in reference to the treatment of pneumo-thorax, as I believe that no plan of treatment can be recommended as even generally applicable to the constantly varying and variable conditions under which the disease appears. Each case must be separately studied; the symptoms of each individual must be viewed in connection with the previous history and the physical signs; and the indications presented by each must be met by means appropriated, not to the name of the complaint, but to the actual condition of the patient at the time. In one case the disease may be accompanied with acute pleurisy, and local bleeding or even venesection may be required; in another, the most powerfully diffusible stimulants may be imperatively demanded, to prevent exhaustion and death. In some instances accompanied with a large accumulation of gas or fluid effusion, paracentesis may be advisable, for the purpose of affording at least temporary relief; in others, the operation will not be attended with the slightest momentary advantage; it will be worse than useless. I have therefore thought it better to pass by the question of treatment almost entirely, rather than to introduce that which might possibly lead to error. In all cases it may be, however, observed, that perfect quiet and rest are most important remedial measures.

I have not entered into a consideration of the possibly remedial tendency of pneumo-thorax and empyema in some cases of advanced phthisis, in which little disease exists upon the opposite side, as I have desired that my statements should be as free as may be from mere hypothesis, and be regarded as (what, indeed, they really are) the pure results of observation. I am, moreover, not aware that I am able with advantage to add anything to the remarks already published upon this matter by Drs. Houghton, Stokes, Barlow, and myself. I cannot, however, allow this opportunity to pass without a brief allusion to this very interesting question, and without referring to the very marked improvement that has sometimes taken place, after the immediate effects of the accidental rupture have subsided, in the symptoms and comfort of persons in the latter stages of consumption, in whom pneumo-thorax has supervened. Hectic fever, previously common, has been observed to cease; the cough, before frequent, manifestly to decrease, if not entirely to disappear; and the expectoration, which had been abundant, to be so much reduced as to be scarcely observable. These consequences of the accident cannot, indeed, be deemed wonderful, when it is recollected that an organ in a state of active disease, and perhaps of inflammation, containing abscesses with large secreting surfaces, is, by the pressure of the gas upon its exterior, so

collapsed as to be rendered inactive; that little or no air enters its vesicles, and that the blood permeating its vessels is reduced almost to a minimum; that the diseased organ becomes quiescent, and the whole function of respiration is carried on by one which is comparatively healthy. I think, indeed, that there can be little doubt that, in some few instances, life has been prolonged by the occurrence of this accident, though it has been regarded as a speedily fatal a complication to phthisis by some of the French pathologists.

Scarcely anything has, in the preceding pages, been said in reference to prognosis, and nothing respecting the curability of the affection, as I believe we are not at present in possession of any facts amounting to a *proof* that it has ever been cured, or, indeed, that it is really susceptible of cure. Dr. Houghton has, as it appears to me, with great propriety, briefly alluded to its curability. There seems, indeed, nothing in the nature of the disease itself which renders it unsusceptible of cure. There is nothing, with which I am acquainted, in morbid anatomy or pathology, which is opposed to the possibility or even the probability of such an occurrence. If, for example, in the cases of Dr. Townsend and Andral, or even in cases III., IV., and X. in this paper, simple pleurisy had followed, and by the effusion of plastic lymph had sealed up the aperture; if, by perfect rest, this lymph had subsequently become organised, and adherent to the costal pleura, and a permanent barrier had thus been formed against the farther ingress of air to the serous membrane; as it is known by experiments upon the lower animals that gases may be absorbed from these membranes, and it is a matter of almost daily observation that fluid effusions are thence absorbed, there does not appear any reason to doubt that it is at least within the range of a not very remote probability, that the pneumo-thorax might have been removed, and the disease thus far absolutely cured. Cases, indeed, sometimes occur, which, to the attendants, seem to indicate that such a process has actually taken place. But in such cases as in phthisis, when recovery is established, though there be no dispute as to the previous existence of disease, and of extensive disease in the lung, doubts will be expressed by readers or auditors, and will occasionally occur to the minds of the observers themselves, whether that disease was really phthisis in the one case, or pneumo-thorax in the other. An instance of this recently occurred to myself. A young married lady, several of whose brothers and sisters had died of phthisis, and who had herself for some months been in delicate health, was after an abortion attacked with severe febrile symptoms, accompanied with relaxation of the bowels, by which she was much reduced. She had not been previously troubled with cough, nor had she ever suffered from hæmoptysis, and her chest had been pronounced by more than one examiner, free from disease. Her attendant during the attack under consideration thought differently, and I was requested to see her with him in consultation. I found her much exhausted; she had recently passed large quantities of sanguineous fluid, mixed with alimentary matters, from the bowels; her features were contracted, and her eyes sunken; copious perspirations existed on the face, and she had a clammy state of the surface; the respirations were 45, and pulse 140 to 160 in the minute, and so feeble as scarcely to be felt. She had no cough, nor had she suffered from any; and, though her respirations were so frequent, her voice was tolerably firm and steady. In this condition a minute exploration of the chest could not of course be made, and would not have been justifiable; but as I knew that its condition was a source of great anxiety, and that my opinion would be requested thereon, I made such examination as the state of the patient permitted. I found the left side free from abnormal signs, and the right tolerably resonant on percussion, except at the lower and posterior part. This side was but slightly moved upon inspiration; and the respiration was hoarse below the clavicle. Posteriorly and inferiorly the breathing was tubular and fistulous, and the voice so shrill as to approach to metallic resonance. Such alone were the facts which I was then able to collect. She was ordered opiate enemata, and large doses of acetate of lead and opium, with such occasional stimulants and fluid nutritious diet as she was able to take. The next day she was in some respects better, as the dysenteric diarrhœa had been much moderated; but on the following day she was still lower than before. Her exhaustion was now extreme; her respirations 60, and her pulse as nearly as it could be counted 160. She appeared, indeed, almost beyond a justifiable hope of recovery, but was ordered large doses of ammonia and opium, with mucilage, and infusion of serpentary or cusparia, every three hours; to have the enemata administered if required, and to take brandy and water and nourishment frequently. By these means, together with perfect quiet and excellent nursing, to the great surprise of her friends, and the still greater surprise of her medical attendants, she began slowly to recover. The affection of the bowels was no longer troublesome; but as there could be no doubt whatever of the existence of serious and extensive mischief in her chest, her ultimate recovery was considered and stated to be exceedingly problematical. As to the exact

nature of that disease, the considerations of her belonging to a phthisical family; of her having been previously examined, and stated to be free from thoracic affection; of her never having suffered from cough, or, to her recollection, from pain of the affected side; together with the exceedingly rapid breathing and extreme collapse, perhaps caused by the serious drain on her system taking place by the bowels, led me to suppose that the complaint in the chest was pneumo-thorax. I did not visit her again for about two weeks, when she had much improved, and the dysenteric affection had long ceased. The pulse was still 140, very small and feeble, and the respirations 40 in the minute; the skin soft and clammy, and the features pinched, though the expression of countenance had much altered for the better. On exploring the chest I still found the left side free from the evidences of disease. The right was almost motionless upon inspiration; it was generally not dull upon percussion, and anteriorly was rather more resonant than natural, except below the clavicle. It was destitute of pure respiratory murmur in every part. Tubular breathing existed anteriorly, even below the clavicle, and over the scapula posteriorly; while below that bone the breathing was decidedly fistulous, and the voice shrill and metallic. Hippocratic succussion was not present. She has for the last three months been very slowly, but, with one brief exception, gradually improving in health and strength, and she is now able to walk out, to join her family circle, and to engage in the lighter domestic duties of her establishment without inconvenience. I have not examined her chest, nor seen her in a medical capacity, since the occasion last referred to; I am therefore unable to make any report upon the present state of the lungs and circulation, though I was informed by her medical attendant that for some weeks, or even months, the pulse had continued exceedingly feeble, small, and rapid. The facts of her case, so far as they are here related, are those that I myself observed. I am unable to account for them, excepting upon the supposition of the thoracic affection having been pneumo-thorax, and of its being either cured, or so much reduced in amount as to be comparatively harmless.

Conclusions. — From what has been stated in the preceding pages, and for the most part illustrated by the cases therein related, the following conclusions may, I think, be fairly derived:—

1. That pneumo-thorax is often not so speedily fatal as has been represented, especially by the French pathologists.

2. That the decomposition during life of effused fluids, and gaseous exhalations from the pleura, are, to say the least, doubtful causes of pneumo-thorax.

3. That pneumo-thorax has not been proved to arise from other causes than a communication of the pleura with the external air.

4. That the most frequent causes of pneumo-thorax are phthisis, empyema, and gangrene of the lung, in the order in which they are mentioned; and that, independently of external violence, pneumo-thorax from other causes is extremely rare.

5. That pneumo-thorax occurs as a consequence of phthisis, with a very small cavity, or without any cavity, existing in the lung.

6. That according to the records at present possessed, pneumo-thorax is more frequent in males than females; and the right side of the chest is rather more frequently affected than the left.

7. That urgent dyspnœa and great prostration do not necessarily accompany the accession of pneumo-thorax.

8. That pneumo-thorax may take place without the occurrence of any symptoms by which the period of the accident can be positively determined.

9. That tympanitic resonance on percussion, and absence of respiration, are not pathognomic of pneumo-thorax, as these physical signs may exist without pneumo-thorax, and pneumo-thorax may exist without these signs.

10. That pneumo-thorax is generally easily recognized by physical signs, but that even with their assistance the diagnosis is sometimes difficult and uncertain.

11. That the absence of the symptoms which usually supervene upon the occurrence of pneumo-thorax, and of the physical signs which generally accompany it, is probably dependent upon the presence of a considerable amount of disease existing in the lung, upon extensive pleuritic adhesions, or upon the two combined.

12. That the greater the amount of disease in the lung, and the more extensive the adhesions of the affected side, the less marked are probably the symptoms of the attack, and the less characteristic are the physical signs of the disease.

13. That enlargement of the side, displacement of the heart, and protrusion of the liver, are not necessary accompaniments of pneumo-thorax.

14. That the preceding symptoms, when present, are probably dependent upon the opening into the pleura being of small size, or being obstructed, or upon fluid effusion, as they do not usually occur in simple pneumo-thorax when the opening is large or free from partial occlusion, or when the fluid effusion is not considerable.

15. That the operation of paracentesis is

not to be recommended in pneumo-thorax, except for the purpose of relieving urgent symptoms, arising from the accumulation of gas, or of removing the fluid effusion which accompanies it.

16. That the general treatment of pneumo-thorax must depend upon the symptoms presented by the individual case, but that in all cases, and under all circumstances, perfect rest is likely to be attended with advantage.

17. That it is probable that the supervention of pneumo-thorax in some cases of advanced phthisis has tended to the prolongation of life.

18. That there is no valid reason for believing that pneumo-thorax is unsusceptible of cure, and that it is therefore necessarily uncurable.

SOME OBSERVATIONS ON THE ANATOMY OF THE INGUINAL CANAL.

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The following remarks contain the substance of a lecture I have been in the habit of delivering now for several years, on some disputed points in the elementary anatomy of the inguinal canal. After the publication of Mr. Guthrie's original memoir, I still continued to doubt the fact of any *distinct* muscular fibres having been ever seen in the situation described by that distinguished surgeon and anatomist; but a case did at last occur in which such a muscle actually existed; and I have felt it to be a duty to my students, and to myself, to state that no doubts whatever now remain in my mind of the perfect accuracy of Mr. Guthrie's dissections.

Although many practical and good surgeons consider the anatomy of the inguinal canal, its coverings, walls, and fascia, as a matter of but little moment in practice; yet it cannot be denied that many very distinguished operators have thought otherwise, and have published memoirs and treatises not only on the pathology of the canal in question, but also on its minute healthy anatomy; implying that they deemed the determination of its structure a matter which would not, and ought not, to be discussed in an off-hand way. But perhaps, after all, the disregard shewn to the minute anatomy of hernia, as it is called by certain surgeons, is intended to be applied merely by them to the coverings of the hernial sac, without any reference to their elementary structures, forming the walls of the inguinal canal; for it is to be presumed, that scarcely any one would venture to assert that even this degree of knowledge was not required by the surgeon, to guide him safely in his operations on hernia, whether by the knife or the taxis—to investigate the pathology of unfortunate cases—and to contribute his share, however small, to the onward progress of the science and of the art.

It is under this impression that I humbly venture to think, that notwithstanding the authority of some distinguished surgeons, the minute anatomy of the elementary and normal structures composing the inguinal canal affords a fair subject for investigation in a practical point of view, independent of all other considerations.

That I may not be mistaken as to what is proposed in this memoir, I beg, *in limine*, to state it to be my intention to limit what I have to say altogether, or nearly so, to a consideration of the different forms and arrangements assumed by those portions of the internal oblique and transversalis muscles which are more especially connected with the canal; or, in other words, their inferior margins, and their mode of attachment to the pubis, and to the inner surface of the crural arch.

This examination will be found to include, I apprehend, some points of considerable interest, and a few, perhaps, of even a strictly practical bearing.

1. The obliquus internus and transversalis muscles are connected inferiorly, or have an origin, in the usual language of the anatomist, from the internal or concave surface of the crural arch. The extent of this origin varies, also its form or nature; and this happens in respect to both muscles; for, without pretending to enumerate all or half the varieties which occur here, it may be shortly stated that, commencing at the anterior and superior spinous process of the ileum, it may extend inwards—that is, towards the pubis—for

a full half, and even more, of the nner surface of the crural arch; or it may be limited to an inch or so of the same surface.

Again, both muscles (I mean, of course, the obliquus internus and transversalis) may extend equally low down, and be co-extensive in their attachment to the crural arch, or one may be there imperfect and shorter than the other; and this may happen either to the obliquus or to the transversalis; an inequality extending also to their tendons, even to that portion found behind the middle of the rectus muscle, and forming the posterior wall of its sheath, where occasionally it will be found that one tendon obviously stops short of the other; and this seems to happen most frequently, but perhaps not exclusively, to the obliquus. Besides this, the attachment of these muscles to the interior surface of Poupart's ligament varies also exceedingly in respect to their connection or union with the cremaster muscle; for sometimes there runs a distinct and common tendon, for the space of at least an inch, between the obliquus and transversalis on one hand, and the cremaster; and very often there is no such tendon. Occasionally it is somewhat difficult to say what fibres belong to the cremaster, and what to the abdominal muscles; nor will an appeal to the other extremity of the cremaster always solve this difficulty (although it generally will, for an obvious reason), insomuch as a few scattered fasciculi of these doubtful or indeterminable fibres may actually follow the cord, as if they truly belonged to the cremaster, but quit it previous to reaching the external abdominal ring, and return, forming a loop to be attached to the pubis, upon the surface of the conjoined tendons.

2. It being admitted that these varieties in the conformation of the lower margin and inferior origin of these two abdominal muscles are met with, I have next to consider the progress of these muscles along the upper edge of the inguinal canal, over or superior to the spermatic cord, at its exit from the deep ring (ring of the fascia transversalis) towards the pubis and linea alba, in which they terminate by expanded tendinous fibres. But here arises an important question, and a much disputed one: do all the fibres of both muscles run over or superior to the spermatic cord, at its exit from the deep ring, or at least may be made to appear so, and to do so in reality, by a little dissection, a clearing away of a little cellular substance, and a cautious use of the handle of the scalpel? This question I endeavour to answer in this way. Shewing by dissection, exposed in the usual way, the inguinal canal and the cremaster muscle running through it, divide this muscle about half an inch above its passage through the external ring; this will enable the dissector to draw it fairly out of the canal, exposing the concavity or rather internal surface of the ligament of Poupart; and if he at the same time draws upwards and somewhat inwards the spermatic cord, he will expose the posterior wall of the inguinal canal throughout about one-half at least of its external portion. Now this wall he may, and probably will find, in a hundred consecutive dissections of this part, to be formed mainly by the fascia transversalis, and by its union with the crural arch and femoral aponeurosis. Further to satisfy himself on this point, let him cautiously dissect away from its somewhat varied origins and connections, the whole of the cremaster muscle, and still he will find that the posterior wall, at the part I now speak of, is not muscular.

But the question is, I presume, not as to what it usually is, which, beyond all doubt, is what I have now stated it to be, in conformity with the concurrent testimony of nearly all anatomists; but is it ever otherwise? or, in other terms, is it ever muscular? Are muscular fibres ever found in this situation, towards the upper and outer extremity of the inguinal canal, independent of the cremaster, no matter how arising, whether from a tendon common to these with the obliquus and transversalis, or arising disjointedly and separately from the inner surface of the crural arch, and descending in the canal towards the pubis, upon the fascia transversalis, inferior to the deep ring, and consequently placing that ring, with its constant and occasional accompariment—that is to say, the spermatic cord and the bowels in hernia—in the peculiar position of an opening, which, if not a muscular opening, which it could under no circumstances be, at least an opening having muscular fibres above, and

muscular below it, practically influencing surgical considerations respecting the structure and form of the opening itself? Now this question has been answered in the affirmative by two anatomists, Mr. Guthrie and myself, with this difference, however, that the one considers it to be a rather common occurrence; the other states it to be so rare, that of hundreds of dissections performed by him, he has but once observed the presence of this additional muscle, or portion of muscle. The individual case was shewn to me; the presence of the muscle could not be doubted. In this instance, then, the spermatic cord, at its passage through the deep ring, did pass through a muscular opening the instant it had escaped from the deep ring. Had hernia been present, it might have been liable to strangulation from the action of the muscular fibres above and below the neck of the sac; but surely not of a kind demanding any remedial means beyond an active bleeding and the taxis, aided by a favourable position of the trunk.

3. How do the margins and inferior portions generally, of the internal oblique and transversalis muscles, terminate mesially, that is, towards the pubis and linea alba? The anatomy of the tendinous terminations upon and above the pubis being subject to a constant and great variety, has also given occasion to much discussion and dispute, depending mainly, it is to be presumed, on this circumstance, common enough in all these matters, that each anatomist took for granted that the arrangement he had himself always observed was likely to be the constant or normal one; and that which he had not seen, after much dissection, was, at the very least, open to great doubt; or, at all events, would be viewed merely as a variety or anomaly, interesting in an anatomical and physiological point of view, but, from the very rarity of its occurrence, wholly inapplicable to practice.

I shall now take the liberty of stating, as briefly as I can, those varieties which have been shewn me in regard to the mesial terminations of the fibres of the internal oblique and transversalis muscles.

But previous to considering the mode in which the internal oblique and transversalis muscles terminate internally, that is, towards the pubis and linea alba, I shall offer a few remarks respecting their varying form whilst descending along the upper part of the inguinal canal. When the tendon of the external oblique muscle is cut through, and laid down towards the thigh in the usual way, the contents of the inguinal canal in the male are first seen loosely inclosed in a delicate cellular tissue; the external spermatic nerve comes first into view, and on cautiously clearing away a little of the cellular tissue, the fibres of the cremaster, and the lower edge of the internal oblique, become soon distinct.

If these muscles be now carefully separated from each other, about the middle of the canal, the inferior fibres of the internal oblique and transversalis will be found even here to present a very great number of varieties; for sometimes a distinct and well-marked edge may be made out without difficulty; at other times the muscular fasciculi become pale, attenuated, tendinous even; begin to spread out, and terminating separately by extremely delicate fibres, proceed onwards to their destination in the linea alba and pubis. My attention has often been directed to these fibres. Unless carefully dissected, they will at first sight appear to run behind the spermatic cord, and not over it; and this circumstance has often led, no doubt, many to believe in the comparative frequency of such an arrangement; whereas, as we have already seen, it is exceedingly rare, probably not occurring once in five hundred dissections. However this may be, for I pretend not to speak statistically regarding it, these fibres require always a very careful dissection.

I shall now proceed to consider the mode in which these two muscles, the internal oblique and transversalis, terminate internally, or towards the middle plane of the body. The varieties occurring here may be reduced to three.

First, the muscular fasciculi of both muscles terminate by long and delicate tendinous cords attached to the symphysis pubis and crest inferiorly, and to the linea alba above, forming the conjoined tendons of anatomists. When this happens there exists naturally, but not always, a triangular fascial expansion connected on one hand to the cellular sheath of the rectus and pyramidalis muscles, and on the other to

the crest of the pubes, rather internally and posteriorly, and to a certain extent at this point a small portion of the fascia transversalis; this is the triangular and semilunar fascia of modern anatomists. With respect to this semilunar strengthening of the structures, nothing can be more varied; for sometimes it is of considerable strength; at others weak, like cellular tissue: thus, it is in the strict sense of the word a constant part, yet its presence or absence must influence a good deal the production of the direct inguinal hernia.

Secondly, the lowermost fibres of the internal oblique and transversalis muscles, may, in addition to the usual termination of their tendons in the pubes and linea alba as conjoined tendons, transmit a series of semicircular and concentric fibres behind the internal portion of the spermatic cord, either to a small extent, which is common enough, or so large and broad as to form a distinct semilunar muscular or tendinous expansion, situated behind all the lower part of the spermatic cord, having the form of the so-called semilunar fascia, doubling it in fact, and probably taking its place when strong.

Now, this semilunar portion of these muscles, thus forming the posterior wall of the inguinal canal, towards its lower half, may be either tendinous or muscular, narrow or broad, directly attached to the crest of the pubes, or indirectly. When very broad, as I have seen it twice, it produces the curious appearance of a muscular ring or aperture, through which the spermatic cord is passing. To do away with this deception, it is only necessary to cut through the spermatic cord a short way above the external abdominal ring, and drawing it outwards, so as to expose the posterior wall, the semilunar portion of the internal oblique will come fairly into view, and it becomes manifest that the muscular ring so formed by the attachment of these muscles to the crest of the pubes forms but an imperfect ring, even in this sense.

Before concluding this hasty sketch, I may take the liberty of discussing the practical question, does the spermatic cord in any individual pass in its course whilst entering, situated in, or emerging from the inguinal canal, through an opening or ring, whose edges are muscular; or, in other terms, does the spermatic cord immediately on passing the deep or internal inguinal ring (ring of the fascia transversalis) likewise pass through a *muscular opening* formed by a splitting of the internal oblique, or of the transversalis muscle, or of both. Now, I have already remarked that this may occur; that in fact it has occurred; but so very rarely, that it seems to me scarcely a practical question. I allude, of course, to its bearing on that form of hernia called the *indirect inguinal*, which descends in the course of the spermatic cord. But it is also possible that the spermatic cord (and hernia when present) may pass through a muscular opening formed in three ways; first, by the presence of muscular fibres above and below the deep ring so arranged as more or less completely to enclose the cord; the form of the opening will be an elongated narrow slit; secondly, the termination of the conjoined tendons, as they are usually called, may be so broad and expanded, as to run behind that portion of the cord lying behind the external or superficial ring, and forming thus the posterior wall of the lower inguinal canal, extend outwards by concentric semi-circular fibres, until they approach within about an inch of the lowermost fibres of the internal oblique and transversalis, as they arise from the inner surface of the crural arch. Now this arrangement is not so unfrequent as the first, but the muscular ring so formed is not so complete; or, lastly, both sets of fibres may meet upon the posterior wall of the inguinal canal, and thus form a complete muscular ring. But such an arrangement I have not seen, nor am I aware of its having been described. In conclusion, all consideration as to the result of these arrangements, in how far they influence surgical practice in respect to strangulated indirect inguinal hernia, I leave to the practical surgeon, who alone can properly decide on their value.

RECORD OF CASES.

By Thomas Mayo, M.D. F.R.S.
Physician to the Infirmary of St. Marylebone.

The march of science in medical philosophy must be from individual instances to general propositions. In the application of the proposition to prac-

tice, the direction of thought is reversed. But we should err, if we limited the science of medicine by this description of it; for, *pari passu* with the procedure thus noticed, and subsidiary to the application of the principles thus acquired, another highly scientific operation is demanded. Indeed, the march of science towards the formation of general principles will be practically valueless, if the above mentioned procedure be deemed all-sufficient; if an enquiry be not at the same time vigorously conducted as to the shades of difference which separate from each other, and individualise, cases of the same kind. In the first point of view in which I have placed this subject, we deal with facts in relation to their common points; but in this second point of view we have to deal with them in relation to their discrepancies. The first operation is statistical in its nature, and would lead to an undiscriminating practice: the latter operation unties the facts thus accumulated, and subjects them to an ordeal which is requisite to their exact use.

I make the above remarks, in order to obtain their just place and importance for an enumeration of cases. Thus individualised they possess, perhaps, a less philosophical air, than in their statistical character. But their utility is obvious. Indeed, the practical character of the English mind has largely enriched our medical literature with cases comtemplated in this point of view. We abound in most valuable monographs. Such, then, is the point of view in which I wish the following cases to be regarded, however inferior they may be in quality.

But, in reference to the publication of cases, there is another consideration, to which I would gladly call attention; and I trust I have not altogether failed, if I shall stimulate other members of the profession to take it up themselves.

If a discovery be made by a physician in pathology or therapeutics, he records it by publication. If he has lectured ably and successfully on pathology and therapeutics, he publishes his course of lectures. In the first case, the practice laid down will be peculiar, but it will relate only to the immediate department of medicine in which the discovery is made; in the latter case the practice laid down will be studiously general. It will represent the prevailing practice of the day. But we want *also* the practice of the individual physician. Eminent physician rises after eminent physician, runs a beneficial course, and dies without leaving a memorial of his habitual method of practice, except in the decaying recollection of his contemporaries. We may justly lay claim to a very improved state of pathology in the present age. But, how gladly should we receive information, if such could be given us, how a David Pitcairne, a Warren, or a Bailie, treated certain combinations of symptoms, and with what event. The agents suggested to the medical mind by a survey of disease, viewed from different aspects, and on different hypotheses, will have interesting differences, which such records of practice alone could adequately lay before us.

In the enumeration of benefits that may result from published cases, we must not leave out one, implying, indeed, humble merit in the publisher, but of very considerable value to a class of perusers. Every student must have been aware of the value of a hospital case-book. The publication of such a record of pathology and practice would be of great value, and not the least so in presenting to him ordinary cases. The cases usually recorded in our journals are placed there because they are remarkable, and therefore of less frequent occurrence. So far, then, as this source of information is concerned, his daily wants, such wants as every one must have felt at the commencement of practice, are left unsupplied.

The following publication may in some measure contribute to the supply of these wants, since cases of ordinary occurrence fall plainly within its scope. Let it be remembered that the most ordinary case, if faithfully given, as far as the description goes, is illustrative, either by contrast or resemblance, of all other cases under the same head.

Cases of Peritonitis, &c.

Ann Chesworth, aged 8 years, a thin pale girl, with a very anxious eye, and distressed look, was admitted into the St. Marylebone Infirmary, the 24th of September, 1842, having been ill two days. She was constantly crying and fretting, but made no definite complaint. There was a quick small

pulse, a hot head, restlessness, some distension of the abdomen, and some tenderness; not easily recognised, indeed, as she complained, wherever she was touched. I saw her on the 25th: she had been much relieved the day before by leeches applied to the temples. Hydrarg. Chlorid. grs. iij. had been given her every sixth hour. She was passing by the bowels green shreddy fæces, and had been doing so before the calomel was first given. Vomiting, which had before existed, is relieved. Pulse small and quick.

26th. — Continues free from sickness; fretfulness abated; fæces continue green.

Sumat. Hydrarg. cum Creta, grs. ij.; Hyd. Chlorid. gr. j. bis quotidie.

October 1st.—Other symptoms remaining the same, I observed that respiration was quickened, and was informed that she had coughed during the night. Examining the thorax, I found extensive small crepitus and deficient vesicular penetration in both lungs, principally in the right. Conceiving this to be intercurrent pneumonia, I applied a large blister interscapulus, and continued the mercurials. The quickened state of respiration was the only additional symptom which occurred. Her general appearance, and state of pulse and skin, was that of simple fever. There was no delirium, but constant fretfulness, and an aspect expressive of distress. The mercurial treatment was continued, with similar, but less copious motions; no effect on the gums. She died on the 4th of October, somewhat suddenly.

Autopsy.—Pia mater congested; brain normal, except that it was firmer and drier than usual.

Extensive *engouement* of both lungs, first stage of pneumonia; heart normal.

The external surface of the peritoneum, the muscles being dissected from it, was red, and covered with apparent granulations secreting pus.

Much pus in the cavity of the abdomen. The peritoneal coat of the intestines was normal, except that slight and delicate membranes partially connected some of the convolutions.

The extent to which inflammation of thoracic and abdominal viscera, and hypertrophy of brain, had proceeded in this case, compared with the symptoms furnished during life, is remarkable. The mental and some of the physical symptoms resemble those of another case, which I will relate.

Eliza Gyon, aged 11, was admitted into my female ward, in the Infirmary, Oct. 29, 1842. She had been previously in the surgeons' ward, under strumous ophthalmia. She was then taken with the ordinary symptoms of fever, and transferred to the medical wards. She made no complaint of pain, nor did she seem to suffer any; lay straight in bed on her side or on her back, and except some heat of skin and the inflammatory state of her eyes, exhibited no morbid physical symptoms. I understood that she had been perverse in the surgeons' ward, and this she seemed to manifest in the highest degree, refusing to give any information, and to do anything that she was desired to do, except eating and drinking. She repeatedly beat a little girl who, for a short time, was placed in the same bed with her; when not scolding, she was apparently inattentive and sulky. After a few days the heat of skin increased, and her mouth became much encroutée, as in fever. For the last four days of her life, the visage also had the character of severe febrile illness, but her fulness of person did not diminish. The bowels were regular, motions loose. Throughout this illness she took Hydrarg. Chlorid. grs. ij. 6tis., which were easily given her in food. She died on the 26th of December.

Autopsy.—The brain and thoracic viscera were healthy, cadaveric congestion (apparently) of the lungs.

On opening the abdomen, though only twenty-eight hours had elapsed since death, we noticed commencing putrefaction in the peritoneum, both intestinal and abdominal. The pelvis contained six ounces of pus. False membranes covered a portion of the intestines. There was an ulcer in the ileum, near the cæcum, of the size of a half-penny, perforating both internal coats; another in the colon, of the size of a sixpence.

On making inquiry at the school of the workhouse respecting this girl, I found that although rather dull and stupid, she was considered peculiarly good-tempered. In her, therefore, the peevishness and ill temper, so strongly expressed during illness, were undoubtedly indicants of disease. The question is not yet sufficiently explored, what precise changes of moral character and intellect belong to different states of disease.

In both the above cases of peritonitis the insidious march of the disease is worthy of notice. The following case illustrates an equally insidious coming on of peritonits, under *other* circumstances, and has an important bearing on the subject of paracentesis.

John Strutt, aged 41, admitted into the Infirmary, May 26, formerly a man of intemperate habits; had laboured under ascites for three weeks. Tall, thin, dark: apparently he has been of strong constitution. There is evident fluctuation in abdomen; œdema of the legs and thighs; he can lie straight; pulse sharp, not strong, 80; occasional sputa, mucous, somewhat reddened; urine very deep coloured, clear on being heated, acid, not albuminous: sound on percussion best under right clavicle; breathing vesicular, but with a loud snore, very rough and muco-

crepitous under left clavicle; he makes about a pint and a half of urine per diem; complete pulsations of the heart about thirty in the minute; numerous small irregular pulsations intermediately; its place apparently pushed up; no bruit.

The treatment applied was, Elaterii gr. ⅓ every second night for five or six doses, then intermitted, and the course in a few days resumed. Acupuncture of thighs and legs, attended with free discharge, which greatly relieved him; frequent small blisters under the clavicles. His diet was nutritious, and freely taken.

Finding that his strength and feelings had improved on this plan, but that after a time he became stationary, and then seemed rather to recede; also that diuretics (except elaterium) were of no avail in his case, on the 29th of July I directed paracentesis; twenty pints were removed. During the operation, the heart's action became regular and steady. He described himself as much relieved.

Sumat. Misturæ Juniperi C. ʒjss.; Potassa Acetat. ʒss.; Sp. Æther. Sulph. C. 3ss. 6tis.

On the 30th, his visage had become rather contracted; his tongue dryish, though of good colour; he had coughed much during the night; no motion; little urine; no tenderness or distension of abdomen; much fluid continued to flow from the puncture; scrotum swelled and painful; restlessness.

Sumat. Pil. Hydrarg. Chlorid. grs. iv.; Morphiæ Muriat. grs. ⅓ bis quotidie; Ol. Ricini ʒss. statim. Perstet in usu Misturæ.

Aug. 1.—This plan has answered; more urine; bowels freely open; he looks better; the breathing quiet; abdomen soft, not tender; discharge from puncture great; no cough complained of.

Perstet Ol. Ricini, ʒiij.

2d.— Sinking; he died on the 3d; he had six ounces of gin allowed him for the last five days, having previously taken three ounces per diem; his diet one chop, one egg, with bread and milk.

He was examined on the 4th.

The contents of the cranium were healthy. Some fluid in the pericardium; heart small, perfectly healthy; the aorta and pulmonary artery had a strong red tinge, apparently from imbibition; his left lung extensively adherent to pleura, and much gorged with dark blood, but perfectly crepitant; no tubercles; right lung similarly gorged, but less so in degree; liver normal in size, of nutmeg colour externally; universally hobnailed, hard, and of a mud colour throughout. Kidnies healthy, except that they were rather soft. Spleen healthy; coagulable lymph extensively spread on the peritoneum, giving out numerous and slight membranes adherent to the intestines; no inflammatory or morbid character of the puncture made by the trocar, which was closing up.

It is to be observed in respect to the operation here performed; 1stly, that the deterioration which proceeded after it, had commenced in some degree before it; 2dly, that the congestive state of lungs was plainly a state requiring relief, such as only tapping could afford; for, 3dly, the state of the liver makes it improbable that diuretics and purgatives could have removed the ascites, these remedies (which had indeed been tried) requiring a more healthy state of the general system.

The pathology of the peritonitic symptoms is obscure. Neither tenderness nor tension of the abdomen existed while this state must be supposed to have been proceeding.

[To be continued.]

MEDICAL NOTES.

By James B. Thompson, M.D.

(For the Medical Gazette.)

A young lad on board the convict ship the "Marquis of Hastings," during the voyage to Van Dieman's Land in 1842, laboured under a most obstinate bowel complaint, for which every known remedy was tried, and without any good effect. Previous to this lad having been embarked, he had been subjected to somewhat of a rigorous discipline in the Parkhurst Institution, Isle of Wight, and was rather insubordinate, for which he was kept on low diet for some time. None of the remedial measures tried during the voyage succeeding, on the ship's arrival in Hobart Town, after a four months' voyage, the lad was reduced to a very low and enfeebled state. There was a consultation of medical officers held, when it was discovered that this lad suffered from the presence of a stone in the bladder, and which was only detected by accident while making an examination per anum for a supposed disease of the rectum. This case shows the precaution requisite in the treatment of all cases. Here was a case where the lad's youth would lead one to suppose the pressure or irritation consequent upon stone would be least likely to produce the symptoms that presented themselves. It was agreed upon to

improve and restore the general health, which was much deranged, and prepare him for the operation of lithotomy.

A woman, on board the barque "Eagle," on the homeward-bound voyage by Cape Horn, South America, from Sydney, New South Wales, in 1843, and who was a soldier's wife, and a confirmed gin-drinker, was in the habit of taking two scruples of Dover's powder at night, which wsa equal to four grains of opium. It does not act as an astringent on the bowels, as one would expect, and only barely produces an ordinary degree of sleep, and if not given in this quantity a less dose has the effect of acting as a stimulant. In some cases opium has been observed to act as a purgative, and the pulvis antimonialis as a sedative. In regard to this woman's case, it may be necessary to state that her husband, who was a soldier in the 80th Regiment of Infantry, and servant to one of the officers in Sydney, shot himself a few months before, while engaged in attendance at the mess-room. This, no doubt, must have preyed upon the woman's mind, and in the absence of gin on board, necessitated her to have recourse to the next intoxicating agent then at her command, and was a constant patient and consumer of opium during the voyage to this country, which varies from four to four months and a half: we sailed on the 25th of February, and arrived at Gravesend on the 2d of July, 1843.

Serjeant Weston, æt. 36, of the 80th Regiment of Foot, who was invalided home from foreign service, having served abroad for the usual period of years, and had latterly laboured under phthisis pulmonalis, was comparatively well during the homeward voyage, and that, too, at the coldest part of the passage to the southward of New Zealand, and while off the Cape Horn and the Falkland Islands; but the day on which we approached the tropics, and got abreast of Monte Video and Buenos Ayres, he got gradually worse, and his respiration became hurried. The mucus accumulated so rapidly when in the recumbent position that it was found necessary to support him half erect in his berth; and whenever he slept, from his total inability to get rid of the mucus, he swallowed some, generally towards morning, which invariably acted as a purgative. At this period, in April 1843, the days became very agreeable and warm, when approaching the coast of the Brazils off Rio de Janeiro, and it was painful to witness this poor man's anxiety to get his summer or light clothing in readiness; it showed the peculiarity very strongly to be witnessed in this class of patients as they approach their end. He got gradually indisposed for his usual diet, his respiration became much engaged, and he pined and wasted away, and died on the 9th of May off Pernambuco, within a few days' sail of the equator. It was remarkable in this man's case to observe the little inconvenience which he seemed to experience during our voyage in icy regions, in lat. 57° 20′ S. and long. 69° 44′ E. when the thermometer stood very low, and at freezing point. It was interesting to notice the leeches which I brought with me from Sydney—their movements in the bottle always denoting a change of temperature and weather; they always crawled to the top of the bottle on the approach of mild and agreeable weather; but were as sure to drop down and lie meshed together in an inactive or dormant state at the approach, and during the continuance, of stormy and cold weather. They showed indications of a change from eighteen to twenty-four hours before we could ourselves anticipate any. I found a little sugar added to the water a great improvement. The water need only be changed once a fortnight in cold regions, but oftener in warm or tropical climates, varying the quantity of water to the number and previous applications of your leeches: a little fine sand is very desirable, and seems to be liked by the leeches, and with it they are less apt to prey upon each other.

Some remarks on a soldier labouring under insanity in a modified degree.

J. M'Ellroy, æt. 35, unmarried, of a nervo-sanguineous temperament, was on board the "Kent" East Indiaman on her outward-bound passage, when she took fire and went down. He being one of the survivors, served as a soldier for thirteen years in the 28th regiment of foot; was for three years confined in the Paramatta Asylum,

near Sydney; was generally quiet during the passage, unless he smoked more than usual—which was often found to be the case, the people on board giving him the requisites—when he was sure to amuse them all by becoming more talkative, and used to speak of his marriage with the Empress of Russia, and of his being a Doctor of Divinity of Cambridge, and a Doctor of Medicine of some other university. He said he had several musical instruments in his sea-chest, together with a supply of fresh provisions; but the chief mate would not let him have his key or his chest. He often says his officer has entered into a conspiracy against him, and gave fifty pounds for the purpose of forwarding his base project of a vile conspiracy. He is more excitable during the early part of the day, while in the tropics, than at any other period; and became rather violent during the ship's detention in the port of Pernambuco for water and fresh provisions. For several days we had to put the strait waistcoat on him, owing to the mistaken kindness of some of his fellow soldiers in providing him with tobacco or spirits, which no surveillance, however cautious, can guard against whilst a ship is in port. In a few days after we sailed, and when the excitement of shore wore off, he assumed his ordinary tranquil mood, and was generally observed to be amusing himself in singing some favourite songs.

The treatment was merely attention to the bowels and regulating the dietary, not allowing any stimulants, occasional shower baths, and very little tobacco. The croton oil, in colocynth pills, was found to be the surest and best purgative, and, I think, well calculated for such cases as the foregoing. This medicine seems to determine from the head, where there may be an undue tendency to accelerated or quickened circulation. The salt-water shower baths seemed to have a very salutary effect. An agreeable and light amusement, of some sort likely to interest the patient, is very desirable, together with a quiet steady man to take charge of the invalid, whose judicious resolve and firmness go a great deal to assist the physician in the cure or alleviation of the worst features in the case of the patient.

We are apt to find similar instances as the foregoing amongst our soldiers invalided home from service in tropical climates. Still more frequently we will find delirium tremens very prevalent. It is nouncommon thing to witness one, two, sometimes more, soldiers carried off the ground after or during a morning's drill—which, by the bye, is sometimes carried to excess at home and abroad; but much more objectionable and culpable in a warm climate, where men are less capable of enduring much fatigue or waste of physical power.

REMARKS ON CONICAL CORNEA.

To the Editor of the Medical Gazette.

Sir,

I have just had the pleasure of reading, in the last number of the Dublin Journal of Medical Science, a very ingenious and learned article on "conical cornea," by Dr. Pickford. As the able writer has, very unintentionally no doubt, overlooked my views on the nature and treatment of that singular malady, and attributed to others suggestions in reference to treatment which are due to me, I trust you will permit me a short space for the purpose of explanation.

Dr. Pickford has referred to the opinion of Mr. Travers, "who ascribes the disease to a constitutional origin;" and to that of Dr. Mackenzie, who, in the various editions of his Treatise, says "it (conical cornea) is probably an effect of some faulty action of the nutrient vessels of the cornea:" but he has omitted to state that I have considered conical cornea to be "the result of a change effected in the cornea by the modifying and arranging powers of the absorbents."* (Vol. i. page 529.) The following quotation from the last number of the Dublin Journal comprises the opinions of Dr. Pickford respecting the pathology of the disease. "In conclusion, I may repeat that I believe conical cornea to depend

* Further extracts would needlessly lengthen this letter. It is sufficient to state that I considered the disease to be not corneitis; or aquocapsulitis; or dropsy of the anterior chamber; but an affection of the lymphatic system of the cornea. The subject needs renewed inquiry, and further elaboration; but I believe the views laid down in my Treatise will be found to constitute the basis of a correct pathology.

upon some disturbance in the functions of the great sympathetic, spinal nerves, and par vagum; producing, through the medium of the lenticular ganglion and fifth pair of nerves, faulty action of the nutrient capillaries and absorbent vessels of the cornea itself." Thus it appears that the views of Dr. Pickford, respecting the pathology of this singular disease, are little else than an expansion of my own, which were in no respect theoretical or speculative, but founded, as the Doctor himself has shown, on the result of pathological examination.

On the subject of treatment it becomes necessary again to assert my claims to priority of suggestion.

"The late Mr. Tyrrell," says Dr. Pickford, "hit upon a very ingenious, though very inefficient expedient, for remedying the defective vision. It consists in altering the position of the pupil, and removing it from beneath the centre of the cornea, or that part which has its figure most changed, to near the margin, where the least change has occurred."

The suggestion in question was first made by me, and not by Mr. Tyrrell, as will appear from the following quotation:—"Where the point of the conical cornea has become opaque, and vision is thereby rendered much more obscure than it would otherwise be, it has been proposed to make an artificial pupil near to the margin of the cornea, which, it is said, will have two important advantages; namely, 1st, removing the pupil from the opaque part of the cornea; and 2d, allowing the light to be transmitted through the least convex part of that membrane*."

The suggestion occurred to me whilst finally considering the subject, as part of my treatise; and was first made known to my pupils and professional friends, and put forth in my work in a scrupulously cautious and unobtrusive form, because I had, as then, no opportunity of reducing the plan to practice, and was unwilling to speak with confidence and decision in reference to a new surgical operation, respecting which I had neither practical knowledge, nor the opinions of others to sustain my views. Mr. Tyrrell does not say the operation had not been previously suggested and practised. In short, throughout the whole of his treatise he gives little attention to the names of contemporary writers, his work being manifestly intended to convey to the profession his own course of practice; the result of his own extensive experience on the various subjects comprehended in his able and eminently practical work. A writer of this valuable class does not step aside to trace the progress of knowledge,—to point out the various advances made by different writers towards the establishment of existing opinions: he chiefly desires to communicate to the profession the mode in which he treats disease;—to make them acquainted with his own views of disease, and method of treating them.

I should be reluctant to conclude without calling the attention of your readers to the ably-reasoned views of Dr. Pickford on the pathology of conical cornea, which appear to me calculated to effect a greater advance towards its correct and successful treatment than has been hitherto accomplished by the united labour and research of all preceding writers.—I am, sir,

Your obedient servant,

RICHARD MIDDLEMORE,
Senior Surgeon to the Birmingham Eye Infirmary.

Jan. 16, 1844.

* See my Treatise, vol. i. p. 538. The first volume, in which the maladies of the cornea are discussed, was printed in 1834; six years before the appearance of Mr. Tyrrell's work. Other surgeons may have previously recommended the plan of treatment advised by me, but I am not aware that they have done so.

CASE OF ADDITIONAL NIPPLE.

To the Editor of the Medical Gazette.

SIR,

I HAVE just had the opportunity of witnessing, in a patient of mine, the following remarkable case. Should you think it worthy of insertion in your valuable journal, it is very much at your service.—I am, sir,

Your obedient servant,

THOMAS H. H. DAVIES,
Surgeon.

Liverpool, Jan. 20th, 1844.

Monday, the 1st January, I was called to attend Mrs. C. in her confinement. She proceeded through the different stages in the natural way. The next day she found that her linen below the left breast was saturated with

milk. Her attention being directed to the cause, she discovered something like a nipple. Upon my arrival she mentioned the circumstance to me, and I found, just below the substance of the left breast, on the integument covering that side of the chest, a decided nipple, about one-third of the usual size. It had a distinct areola around it, and milk issued very freely from it. The most extraordinary fact is, that she had already given birth to four children, but never before detected this anomaly.

I requested my friend Mr. Batty, lecturer on midwifery, to see the case; and he stated that he had never met with such an instance, either in his private practice, or in the public institution to which he belongs.

REMARKS UPON THE EDUCATION OF ARMY SURGEONS.

To the Editor of the Medical Gazette.

SIR,

THE insertion of the inclosed remarks upon the Education of Army Surgeons, in your periodical, would greatly oblige,

Yours obediently,

AN ASSISTANT SURGEON.

January 10, 1844.

The medical department of the army is under great obligations to Sir George Ballingall for his suggestion to establish professorships of military surgery in London and Dublin. But to administer to the practical benefit of such institutions, several obstacles to the advancement of professional knowledge among the medical officers of the army must first be removed. This important body of men in the service of the public are labouring under disadvantages, not only detrimental to the welfare of that service, but injurious to the art they profess.

Before exposing what I hope will be viewed as not trifling bars to professional preeminence in the service, I shall be excused by premising that, peculiarly in the science of medicine, the difficulties of acquiring experience are almost insurmountable, and that our actual information does not increase, in any degree, in proportion to our experience. "The accumulation of materials frequently rather retards than promotes its progress. In other sciences, although truth is not to be attained without a certain degree of laborious research, yet to those who are willing to bestow on it the requisite attention, it is for the most part attainable, or if it still eludes our grasp, we are at least sensible of the deficiency, and can generally ascertain the precise nature of the obstacle which impedes our progress. In the other sciences, when we enter upon an inquiry, or propose to ourselves any definite object for experiment or observation, we are able to say whether the result of our inquiry has been satisfactory, and whether the object in view has or has not been accomplished.

"But this is unfortunately not the case in medicine. There are certain peculiarities necessarily connected with the subject, which render it extremely difficult to appreciate the value of experiment and observation. In our experiments we are seldom able to ascertain with accuracy the previous nature of the body on which we operate, and in our observations we are seldom able to ascertain what is the exact cause of the effect which we witness."

The history of medicine in all its parts affords ample testimony of the truth of these remarks.

Seeing, then, how great is the difficulty of acquiring medical experience under the most favourable circumstances, it will not be considered officious to suggest the removal of all tangible obstacles, and the adoption of every means favourable to this end. And this is the more imperatively called for, when it is known that the opportunities of making decisive observations on the external causes of diseases are much more superior in the army and navy than in civil life; and that it is by the medical officers of fleets and armies, "who are perfectly informed of the whole circumstances of the organized bodies of men under their observation, and often see these circumstances suddenly altered, or have even the power of altering them at pleasure," that this sort of inquiry has been prosecuted. By facilitating and encouraging these inquiries, we might expect that the lessons to be drawn from them would prove of even greater importance to the future happiness of mankind than any which we can gather from the history or treatment of diseases.

Whilst endeavouring to expose the *institutionary* defects of our department, without laying myself open to the accusation of introducing novelties, I have to bring to mind that "a froward retention of custom is as turbulent a thing as an innovation."

In the exposition of our grievances, it must be told that the pay and allowances of the junior class of medical officers of the army are inadequate to keep up the character as well of the officer and the physician. The expenses of the table at a modern mess swallow up the greater part of the pay of the junior branches of medical officers; and to these are added other numerous outlays, necessary for the *credit* of the corps. So that they can but ill supply themselves with books and scientific instruments, and but just obtain admission to the libraries where the opportunity offers. There is no provision, like in the scientific corps of Engineers, made to ensure medical officers a proper supply of books, instruments, stationery, &c. or even allowance to convey them where they possess them. Not only is this the case, but we are doomed to see our military brethren enjoying allowances, which, from a corresponding position, we should expect might have been extended to ourselves. This is evident in the cases of paymasters, adjutants, and quartermasters of Depôts, and reserve battalions, in which situation assistant-surgeons are allowed—nothing!!

The severity of duty is proverbial in the tropics and many other stations; but, however severe, there is no remuneration. Often we look with jealousy upon the officers commanding companies being allowed in some stations two servants, and officers of the Commissariat "climate money," which, perhaps, would somewhat also contribute to the health and comfort of the poor assistant-surgeon, who is at the beck and call of all, at all periods of the sultry day and infectious night.

The most important topic I would wish to dwell on, however, is the difficulty of acquiring medical knowledge in the army. The obstacles to this are many and conspicuous. The difficulty of acquiring medical experience demands that greater facilities should be given to medical officers to keep pace with their brethren in civil life, much less to cultivate the science of medicine in various climes.

The custom of keeping medical officers abroad so long, without giving them an opportunity of returning home, oftener leads to neglect of science, to apathy, and even disgust. The evil of this counterbalances the good produced in acquiring experience of local diseases by long residence, as the knowledge is always but imperfect, and even empirical; whereas, from the observations of men who have the advantage of better physiological and chemical knowledge (to be acquired only by frequent study), much more valuable results would accrue.

The custom of keeping medical officers abroad so long, and the habit of refusing them leave at home or abroad, prevents them acquiring knowledge, which is allowed to military officers, by permission to repair to the public schools, &c. "Men returning from protracted absence or foreign stations" are with difficulty able to procure leave to renovate their health, much less to renovate their professional knowledge. By keeping up his knowledge of chemistry, and other collateral sciences, the army surgeon may often turn his talents to great advantage in observing and experimentalizing upon the external causes of diseases. Inability to procure books and means of improvement will dispose a man's life to sink into comparative indolence, and his time to be employed only in the ordinary routine of hospital duties, which too often degenerate into common-place practices. Long residence in remote stations, and the almost prohibition of leave of absence, leads but to inaction and inglorious indolence.

The absence of emulating societies, too, is not a trifling obstacle to exertion. The establishment of a society among the medical officers of the army would elicit valuable information from its members.

To remove these serious evils, more leave of absence should be granted to army surgeons, to facilitate the acquisition of medical knowledge, as the science is so comprehensive as to require continual study.

The neglect of the medical officers of the army conduces to extinguish all effort and combination for success. General and principal medical officers

seldom, if ever, notice the services of the medical department of the army. Indeed, the marked neglect, and the species of superciliousness, not warrantable by any difference of station in society, and certainly not by better mental cultivation, shown by many military commanders towards the class of medical officers, is not so conducive to exalt the general, as it is to destroy self-respect, and to teach servility in a shy and young medical officer.

These few words but imperfectly expose real grievances, but perhaps may prove sufficient to those who are disposed to read them. The scheme of granting medical men more leave to study in the public schools, either at home or abroad, is sufficiently practicable. Those applying should, of course, be recommended by the Director-general at home, and principal medical officers abroad.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Cataract, and its Treatment; comprising an easy Mode of Dividing the Cornea for its Extraction, and appropriate means for removing the different forms of that affection. By JOHN SCOTT, Senior Surgeon to the Royal London Ophthalmic Hospital, Surgeon to the London Hospital, &c. Churchill. 1843.

MR. SCOTT regards both the difficulty and the chief danger which attends the extraction of cataract as depending upon the force required in transfixing the cornea with the instruments generally used for that purpose. Spasm of the recti muscles is thus induced, by which the iris becomes compressed between the lens and the edge of the knife, giving rise to inflammation, and thus leading to the unfavourable result which too often follows. The author has invented a knife by which he states that the evil above alluded to may be avoided; and the main object of the little volume which lies before us is to introduce the new instrument to the profession.

Mr. Scott takes the opportunity of entering into a description of cataract, detailing the general symptoms, the different forms, and their diagnosis. Into these subjects, however, we deem it unnecessary to follow him; but proceed to notice his observations regarding the treatment. The chief points to which, in this department, he refers, are the circumstances which preclude the propriety of removing the cataract by any operation; those in which an operation is proper; and, lastly, the different modes in which such operation may be performed, as adapted to different kinds of cataract.

Our author is of opinion that the operation is seldom proper to be performed on an eye which retains a useful degree of vision, the patient being very apt, should it fail, to complain of being worse off than he was before. This, he remarks, applies more especially to cases of congenital cataract, in which only the centre of its lens is opaque, and the patient thus retains pretty good vision through the transparent circumference; so that, by means of belladonna, he may retain a useful amount of vision for years; but this he of course loses if the operation shouldfail.

Neither does our author regard it as judicious to operate till the other eye be so much impaired as to convince the patient that it must soon be entirely lost, as he is prone to attribute the loss of the second eye to what has been done to the first.

The cataract, however, being now considerably advanced in the previously sound eye, no farther delay ought to be encouraged. Mr. Scott thinks choice should be made of warm weather, as, in old persons especially, the section of the cornea then heals so much better than it does during cold; so that operating in winter much diminishes the chance of success. He is also much against operating on both eyes at once.

The modes of operating for the removal of cataract are described under the following heads:—

"1st. The making a section of the cornea, through which it is removed altogether from the eye, and which is called the operation of extraction.

"2d. The depressing the lens below the axis of vision, and leaving it imbedded in the vitreous humour, which is called the operation of depression or reclination.

"3d. The opening out of the texture of the lens, and exposing it to the solvent power of the aqueous humour, which is called the operation by solution or absorption."

In performing the first of these—extraction, it has been frequently advised that the pupil be previously dilated by means of belladonna; but Mr. Scott sees no advantage to be gained by this under ordinary circumstances.

The operation may be regarded as consisting of three parts—making a section of half the circumference of the cornea, lacerating the anterior capsule, and removing the opaque lens.

The section of the cornea may be made in various ways: either transversely downwards or upwards, or obliquely downwards and outwards. Mr. Scott always prefers the transverse upper section, as he is then able to steady the globe of the eye, and himself control the upper lid, while by pressing with the back of the knife, he prevents the eye from being turned upwards. The flap of the cornea is little liable to be disturbed, and prolapse of the iris is thus guarded against. The only circumstance under which our author ever practises the lower section is where the brow is so prominent as to forbid the other, a circumstance which very rarely occurs. He sees no advantage in covering up the other eye, as is usually done; but directs the patient to fix it on the light before him, which tends to steady the other eye likewise.

The instruments to be employed are, the cornea knife, for dividing that part; a blunt-pointed curved knife, for enlarging the section if necessary; a curette, for lacerating the capsule; a sharp-pointed hook, for removing the lens if the fluid state of the vitreous humour should prevent its removal by pressure; and a pair of Maunoir's scissors, in case the iris should be wounded in the section of the cornea, to divide the intermediate fibres between such aperture and the pupil.

The cornea knife (and this is the chief point with Mr. Scott) must increase both in width and thickness from the point to the heel, that it may completely fill up the section which it makes, and thus prevent the aqueous humour from escaping. It must also be of such width as to divide one-half the circumference of the cornea, as the lens nearly equals the cornea in diameter. We think it best, however, here to let Mr. Scott speak for himself; and subjoin a quotation embodying the chief points regarding the form of knife which he proposes.

"The objects I propose to attain in the construction of the knife are—

"1st. That it shall be of sufficient length to traverse completely the anterior chamber, and divide the nasal margin of the cornea.

"2d. That it shall increase in width and in thickness from point to heel enough only to prevent the escape of the aqueous humour in its transit across the anterior chamber, but that its width shall have no reference to the dimensions of the section that is to be made, as that circumstance, I conceive, has occasioned all the difficulty of its introduction, and the chief danger of the operation.

"3d. That it shall be of such a shape and figure, that when introduced in the middle of the temporal margin of the cornea and carried across the anterior chamber, it shall readily puncture the nasal side of that membrane; and when placed in this situation, the cutting edge shall be so far beyond the pupillary margin of the iris, and opposed to so large a portion of its anterior surface, as will prevent its escape beneath the edge of the knife to endanger its division in making the section of the cornea.

"4th. That when the section of the cornea is thus about to be made, the edge of the knife shall be opposed only to the margin of the section on either side, and not to any extensive portion of its internal surface, whereby its division would be attended with difficulty, as is the case in using Beer's knife.

In order to attain these objects, the knife must describe a portion of a circle of larger diameter than that of the cornea; and after having tried a vast variety of shapes and sizes, the one I now propose seems to me to fulfil the foregoing indications the most effectually. At first I used a much narrower and finer knife; but I found that, in introducing a cutting instrument of such a length, the aqueous humour was liable to escape unless it increased more rapidly both in width and in thickness. I have also tried one wider at the heel; but in that

case greater force is required for its introduction, which is not counterbalanced by any commensurate advantage in completing the section, unless the cornea be of unusually large dimensions.

"The back of the knife describes a sixth part of the circumference of a circle, the radius of which is ten lines. The chord of the arc formed by the back of the knife is, of course, also ten lines in length, being equal to the radius of that circle; it is therefore greater by four lines than the diameter of the cornea, and the blade is consequently quite long enough to complete the section of that membrane without difficulty. The knife is two lines in width at the heel, whence it gradually tapers to the point; it also increases uniformly in thickness, as well as in width, from point to heel, so as to occupy completely the aperture it makes in the cornea, for the purpose of preventing the escape of the aqueous humour."

"In making the upper section of the cornea with this knife, it is to be held in the usual manner, between the thumb and two fore fingers, the two other fingers resting on the patient's cheek, and the handle of the knife inclined slightly towards the side of the face, while the point punctures the cornea on its temporal margin; the handle of the knife is then to be brought upwards with a sweep as the blade traverses the anterior chamber: in doing this, great care must be taken to press firmly downwards with the back of the instrument, so that the wound may not be unnecessarily enlarged by its cutting edge. This being accomplished, the point of the knife will have reached the nasal canthus of the orbit, and its cutting edge will be so far beyond the pupillary margin of the iris that it cannot be readily divided in completing the section of the cornea. The point of the knife is then to be carried upwards, the handle being slightly inclined in the opposite direction. The section of the cornea on its nasal side will now be complete, a small portion at the upper and outer part only remaining to be divided; and this is readily done in the withdrawing of the instrument.

"In this way, the cornea being transfixed by an instrument of such a size only as will prevent the escape of the aqueous humour, no unnecessary force is employed, either in accomplishing this object or in preventing the eye from rolling inward. The section is completed, not by thrusting a wedge-shaped knife through the anterior chamber, the cutting edge of which divides the circumference of the cornea, only by the force with which its back is pressed against the opposite side of the section, but by an instrument that accomplishes the division of the membrane independently of any such pressure on its back. No unnecessary force is therefore had recourse to, and consequently spasm of the muscles of the globe is much less liable to occur; the aqueous humour is much less likely to escape; and if it should do so, the shape of the knife and its position in the anterior chamber are such, that the iris can scarcely fall forward before its edge; and even if this should be the case, it will much more readily recede behind it, under the slightest pressure of the finger on the cornea.

"In addition to these advantages, it may be observed, that the danger of bruising the iris, by the forcible compression of it against the knife, when spasmodic action of the muscles of the globe occurs, is also avoided, and the consequent chronic inflammation of that structure, that is so liable to be produced from this cause, is likewise obviated."

It is very customary to bleed patients before performing the operation of cataract, with a view of diminishing the risk of inflammation. Mr. Scott does not find this necessary, and mentions, in illustration, that of the last fifty cases of extraction, taken in succession, which he has had at the Ophthalmic Hospital, no blood-letting has been required either before or after the operation. Every precaution, however, is taken to have the patients in a favourable condition, by attention to diet and regimen, and to avoid any degree of violence during the operation itself.

Various other points of interest connected with the subject of cataract are alluded to by Mr. Scott, in the manner of one familiar with the subject of which he treats. We have, however, sufficiently entered upon the chief object of the little volume before us, which we recommend to our readers as

of small price and modest aspect, containing much useful information within a very limited space.

A Practical Treatise on Organic Disease of the Uterus: being the Prize Essay to which the Medical Society of London awarded the Fothergillian Gold Medal for 1843. By JOHN C. W. LEVER, M.D. &c. 1843. 8vo. pp. 240.

EXCLUSIVELY of an introduction containing an account of methods of examination, and the general symptoms of organic disease, Dr. Lever's work is divided into three parts. The first treats of inflammation of the uterus; the second of polypus uteri, fibrous tumors of the uterus, &c.; the third of malignant diseases, namely, cauliflower excrescence, corroding ulcer, melanosis, and cancer.

Dr. Lever has seen inflammation of the uterus produced by the secale cornutum.

"In some cases the inflammation is of a sub-acute kind from the first, and especially in those cases where the secale cornutum has been given improperly. I had under my care five females attended by the same individual, to all of whom he had given the secale, and who were affected by the same symptoms: central pains, increased upon assuming the erect posture, by defæcation, and micturition; tenderness above the pubes; thick white discharge, at times streaked with blood. There was considerable constitutional irritation, marked by a quick small pulse; heat of surface, alternating with chills; coated furred tongue; scanty, high-coloured urine; thirst; loss of appetite, &c. On vaginal examination, the uterus was found to be enlarged, the os tumid and tender, and great pain was excited by pressing with the finger upon the cervix." (p. 43-44.)

The treatment consists in cupping, leeching, anodyne injections, alterative aperients, saline medicines, and abstinence from the husband's bed. "After the active symptoms are subdued," says our author, "the patient will derive great benefit from the use of tepid salt water baths, and a residence by the sea-side will hasten the recovery." But may not the hip-bath at 95° or 96° be used with advantage, as soon as the first set of leech-bites have begun to heal?

Many of the statistical facts collected by the author are interesting. It would appear that functional diseases of the uterus are to organic ones as 2 to 1.

Dr. Lever's work is sensible and judicious; it is the production of a man who has seen much practice, and shows an unwearied industry, which must of itself produce considerable fruit.

MEDICAL GAZETTE.

Friday, January 26, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

FRENCH AND ENGLISH PRACTICE.

To pass a just judgment on foreign nations, and foreign habits, is proverbially difficult, if not impossible. The traveller sees every thing through the mists which haste and prejudice spread before him. His ear falsifies the sounds which reach it; his eye distorts the images which impinge upon it; and with every disposition to be honest, he puts down in his note-book what the polite Houhnhyms called "the thing which is not." In some instances (a minority, indeed,) his retina retains only the most gorgeous rays, and, like a sovereign on a progress, he sees nothing but festive tables, and gala dresses.

Hence, it is a subject of congratulation to the lover of truth when the traveller becomes a resident, and, instead of writing a three months' tour through a large empire, takes the trouble to ascertain facts, and weigh opposite statements.

Dr. Higgins, an English physician who has resided fifteen years in France, has addressed a letter to the *Gazette Médicale*, which is entitled, *Sur l'usage des tisanes en France*, but which, in fact, touches on some of the chief points

of difference between French and English practice; and our readers will not be sorry to hear the testimony of so enlightened a witness. First, he deposes touching ptisans. Now a ptisan, according to Dr. Johnson, is "a medical drink made of barley, decocted with raisins and liquorice;" while a French *tisane* may be made either of rice*, grits, gum Arabic, prunes, jujubes, dates, tamarinds, asparagus-roots, quassia, valerian, roses, violets, red poppies, or a host of other substances. In fact, the codex alone contains nearly fifty *tisanes;* and many more are, no doubt, known in private practice.

In France, whether a disease is acute or chronic, a *tisane* is always prescribed, and its selection is considered a matter of the highest importance, for it is supposed to be a decided therapeutic agent, not a mere beverage, or diluent. Hence the choice of the *tisane* is much criticised, and physicians have been dismissed in pursuance of an unfavourable sentence passed by a female conclave anent the chapter of *tisanes.*

It seems that in France they reckon up four kinds of this beverage, namely, the diaphoretic, the diuretic, the diluent, and the aperient. The first are evidently indicated in certain cases; but Dr. Higgins thinks that the diuretic ones are even more useful in the diseases where *they* are applicable; for while perspiration can be excited by other means, these remedies alone act on the kidneys. So far Dr. Higgins. On looking, however, into the long list of officinal *tisanes*, we can recognize but one diuretic among them, namely, the infusion of asparagus roots; and though others may probably be in use, it surely cannot be necessary that the active principle should always be administered in this expanded form. The usefulness of the third class, or diluents, is obvious; these, and the fourth class, or aperient *tisanes*, are much used and abused in France.

Indigestion, says our Anglo-Gallic brother, is more common than all other diseases put together. It is needless to dilate on its symptoms, such as constipation (or, sometimes, diarrhœa), fetid breath, pasty taste in the mouth, disordered secretion of the liver, and so forth.

Now, supposing these symptoms to proceed from inflammation of any abdominal organ, the first point of the treatment, namely depletion, would be the same in France and England, but probably there would be more venesection on this side the channel. Afterwards, however, there would be a divergence in practice. In France the physician would content himself with prescribing diluent *tisanes* for several days, and then proceed to aperient ones. In England the physician would press onwards more rapidly, and not putting his trust in any *tisane*, would give purgatives, and often follow them up by active diaphoretics.

Which of these methods is the best? Dr. Higgins thinks that the answer depends on the medical constitution, that is, on the reigning type of disease.

When this is inflammatory, as it was when the doctrines of Broussais were in vogue, the French practice is preferable; while the English system is best amid the present forms of disease.

At the commencement of the present century humoral diseases prevailed, or, in other words, the secretions were much disordered; and it was then that Hamilton wrote the famous treatise which has had so strong and long an influence on English practice. British physicians, indeed, found purgatives so efficacious, that when, some years afterwards, Broussais pointed out the arrival of the in-

* *Sume hoc ptisanarium oryzæ*, says Horace. Sat. Lib. 2. iii. 155.

flammatory type, many were unwilling to adopt the new treatment, so efficacious had they found the old one; and thus the theories of Broussais did not meet with the attention which they deserved in England. In France, on the contrary, it was much more favourably received; young physicians adopted it almost blindfold, and their seniors found much in it to modify their former practice. But now another change has taken place in the type of disease; for the inflammatory constitution has been succeeded by its old predecessor, the humoral or catarrhal type. Hence the English, by persevering in the Hamiltonian system, have come right again, "and thus the whirligig of time brings about its revenges."

Gastritis and gastro-enteritis are said to be far rarer than they were fifteen or twenty years ago, and, when they do occur, but seldom require the abstraction of blood; while cases of disordered stomach, with secretions altered in quality or quantity, are of daily occurrence.

Let us take a case of the kind, says Dr. Higgins, and see how it would be treated in England and in France.

A patient suffering from indigestion complains of want of appetite, constipation, weight at the epigastrium, bad taste in his mouth, and head-ache; sometimes, also, of colic, nausea, pain in different parts of the body, &c.; the tongue is foul, if not all over, at least towards the root. In England, the physician would prescribe for this patient two pills consisting of rhubarb, calomel, and aromatic powder, to be taken at bed-time, and a black draught the next morning; or else a glass of Seidlitz water, or an ounce of castor oil; with barley water and a cup of weak tea for drink, and a little broth for dinner. The next day the patient is well. Why does the English physician pursue this plan of treatment? Because he considers the symptoms to proceed from the fulness of the intestinal canal, clogging the digestive functions, and reacting upon the secretions. Now Broussais, or his disciples, would look on such an indisposition as the result of a gastro-enteritis, and would treat it as such. They would prescribe leeches, cataplasms, emollient drinks, low diet, and perhaps a few clysters; and in eight or ten days they would venture on a gentle purgative. In Paris, indeed, and the greater towns of France, there are few physicians so timid at the present day; but in the country the use of *tisanes* and the fear of purgatives are excessive. Even in Paris, where the treatment is more like English practice, *tisanes* would be used at the commencement of such a case, and the physician would end, where we should begin, with the employment of purgatives. The consequence is, that the English patient is cured in one quarter of the time of the French one; and this from practitioners persisting in Broussais' method after the type of disease on which it was founded has disappeared. Meantime the *sommités médicales* of France have for some years begun to deviate from the principles of Broussais, and recognize the advent of a new reign, without being able entirely to throw off their old prejudices.

Again, if we suppose the case, instead of mere disorder of the digestive organs, to be a genuine gastritis, or gastro-enteritis, the antiphlogistic system is to be pursued, but without the use of aperients, until the acute symptoms have given way. But if we attempt to fix the point when purgatives may be administered, opinions on the two sides of the channel diverge. The French physician wishes to temporise, and is afraid that the irritation caused by purgatives will force him to recur to bleed-

ing, though the patient is already weak from previous depletion. The English physician, knowing the immense relief derived from opening the bowels, is impatient to administer a cathartic.

In such cases, the doctrines of Broussais have, no doubt, had their influence in England, though less, we apprehend, than Dr. Higgins supposes; for few practitioners with us would easily find a gastritis or gastro-enteritis so acute as to prevent the occasional exhibition of a dose of castor oil; we should all acknowledge the possibility of such a case, but be loth to see that it had occurred.

This, perhaps, is an error on one side. French physicians stray in the other direction, and are so afraid of inflammation, that the slightest tenderness on pressure contra-indicates, with them, the use of cathartics, even though there is neither thirst, nor a white tongue, nor a quick pulse. They forget the natural tolerance of the mucous membrane of the stomach and bowels.

It bears, says Dr. Higgins, truffles and lobster, tunny, *liqueurs*, and strong wines, yet they shrink from a few grains of rhubarb and scammony. To this we suppose that the French doctors would answer that they never prescribe *thon mariné*, *dindon aux truffes*, or maraschino in cases of gastritis. Nevertheless, we agree with Dr. Higgins that the tolerance of the stomach is great, and is generally far from being outraged by cathartics. Hippocrates, if we recollect aright, compares it somewhere to a leather bag.

As to calomel, it is supposed in France to constitute almost the whole pharmacopœia of English physicians; it is supposed also to be given in enormous doses, and uncombined. We ourselves think that a *juste milieu* is wanting between the excessive use of calomel in England (for excessive it still is, in spite of the reform which Dr. Higgins alleges) and the strange neglect of it in France.

Dr. Higgins is of opinion that the doses of medicines should generally be one third less in France than in England; but he utterly rejects the theory that the treatment of disease ought to be radically different.

He believes this theory to be founded on the old prejudices which prevailed in each country respecting the inhabitants of the other one.

In England it was believed that there were no large men in France; that they lived on soups and salads, and used no drugs but *tisanes* and clysters!

In France it was believed that the English ate nothing but potatoes and roast beef half raw, and swallowed no drug but calomel!

LECTURE
ON
ABSCESS AND FISTULA CONNECTED WITH THE RECTUM,

Delivered in the Theatre of St. George's Hospital, January 10, 1844,

By Sir B. C. Brodie, Bart.

[The subject continued from the former lecture.]

I concluded the last lecture with speaking to you of the mode of performing the operation for *fistula in ano*, where that fistula is of the simplest kind; but I now come to consider what is to be done in cases of fistula where there is some kind of complication.

Sometimes the external orifice is at a considerable distance from the verge of the anus—perhaps two or three inches: it may be even situated near the middle of the buttock. You may then, if you please, perform the operation in the manner which I have already described—that is, by introducing the probe at the external orifice, then along the fistula into the rectum, feeling for the end of the probe in the bowel, passing it into the bowel through the internal orifice just above the sphincter muscle, and then dividing the whole with the knife-edged scissars, or some other cutting instrument. But this is a very serious operation, on account of the extent of the parts to be divided: and a very painful one. There may be considerable hæmorrhage; and, at any rate, there must be a very large surface to

be healed. And the fact is, that this extensive division of parts is not at all necessary, and may be avoided if you proceed in the following manner. Introduce the probe-director, as I may call it, into the gut, through the fistula, in the way which I have already described; then feel for the instrument at some little distance, say three-quarters of an inch, from the anus, and at this point, with a lancet or a double-edged scalpel, make an opening through the skin and adipose substance leading down to the groove of the director; then take out the probe-director, and introduce it into the orifice which you have made, as if the latter were really the external orifice of the fistula; from thence pass it into the rectum, finishing the operation by the division of the parts over the director in the usual manner. Thus you accomplish all that is wanted with a very small incision, laying open the internal extremity of the fistula, and leave the external extremity alone. The fistula, as I have already explained, is prevented from healing by some of the fæces becoming infiltrated into it. But for this the whole sinus would heal at once. The external extremity of the fistula, it is true, in this mode of performing the operation, remains undivided; but the fæces cannot find their way into it, and in a very short time it heals spontaneously; while the other extremity is dressed and healed from the bottom as in ordinary cases.

You will meet with not a few cases in which matter has burrowed and made many sinuses in the vicinity of the rectum, some in one direction and some in another. Sometimes these complicated sinuses are confined to one side of the gut, and at other times they occur on both sides. Before you proceed to an operation in a case of this kind you must examine the parts very carefully, and three or four examinations may be required before you can make out the exact state of the case sufficiently to guide you in the operation. Introduce the fore finger of the left hand into the gut; then endeavour, with the probe introduced into the different sinuses, to ascertain whether there be only one internal communication with the gut, or whether there be more. Very often, where there are several sinuses external to the gut, communicating with one another, there is only one original sinus opening into the bowel; but at other times there are two such communications, or even more. Whatever sinuses there are communicating with the bowel, they must be divided; but as to those which do not open into it, it very probably may be quite unnecessary to interfere with them. If you make the original sinus an open sore, the fæces will not enter the secondary sinuses, and there will be nothing to prevent them from healing. The only exceptions to this rule of practice are those cases in which the matter is not freely discharged from the secondary sinuses, but lies and lodges in them: they may then require to be laid open to prevent such accumulation.

I have told you that if you examine carefully, and look for the internal orifice of the fistula in the right place, just immediately above the sphincter muscle, you will scarcely ever fail to find it. If you do not succeed the first time, you will the second or third. But sometimes the opening is so small, and the sinus takes such a circuitous course, that you may examine the patient two or three times without detecting it. This, I say, will happen sometimes—not often; and what is then to be done? Perhaps, if you were to delay the operation still longer, you might discover the orifice at last; but the patient gets uneasy and impatient at the cure not being completed, and is anxious for something to be done. You must then do what Mr. Pott recommends as a general practice; you must make an artificial opening into the gut. You may use the probe director or a common probe-pointed bistoury, as you please. With the fore finger of one hand in the rectum to direct you, you must cause the point of the instrument, whichever you employ, to perforate the membranes of the gut some way above the sphincter muscle, and then divide the sinus. But this is a very unsatisfactory way of doing the operation, after all; and you may be assured that, if you make an artificial opening into the gut, and do not find the real and original opening, it is doubtful whether you will make a cure. In many cases, at least, you will be plagued afterwards. You have made an artificial opening, but the original opening remains; and although you go on dressing the sore, there is a little infiltration of fæces and mucus into it that prevents the completion of the healing process.

When you have to make an artificial opening in the way which I have just mentioned, I advise you to proceed still further. Having laid the fistula open into the gut, take a straight probe-pointed bistoury, introduce it into the rectum, turn the cutting edge outward, and divide the sphincter muscle so as to set it completely at liberty. No large division of parts is necessary for this purpose; and this being done, you will seldom have any trouble in the healing of the wound afterwards. I say this is better than merely laying open the sinus into the gut, where you cannot find the internal orifice; but there are objections to this more complicated operation which there are not in the other; because there is more bleeding; because you give your patients more pain, and there is a larger wound to

heal. The bleeding, however, from the division of the sphincter muscle, I may take this opportunity of mentioning, however considerable at the moment, is never dangerous. It is completely within reach and under control. You may probably see the vessel that is divided, and secure it by ligature; but if not, a dossil of lint, dipped in a styptic lotion, laid on the part, and retained there by the finger of an assistant for half an hour, will always stop it.

I told you that, in some cases, a fistula has no external orifice, and I described two classes of cases of this description. In one of these there is a small internal opening; and the fæces having penetrated into the cellular membrane external to the gut, an abscess has been formed which has burst into the rectum by another opening above the original one. In this case, by pressing externally, you may generally discover where the matter is lodged. One day the abscess is empty; another it is full. Take the opportunity, when the contents of the abscess are accumulated, so that you may feel the matter through the integuments, to make a puncture with a lancet, and having done so you reduce the blind fistula (as it is called) into the state of a common fistula, with this difference — that there are two internal openings instead of a single one. The further steps of the operation are the same as in ordinary cases, except that you must, if possible, discover both the internal openings, and let them both be included in the incision of the gut. Then I stated that there is another case, in which there is an ulcerated cavity in the neighbourhood of the rectum, having no external communication; and where the orifice in the bowel, instead of being, as it is in common cases, not much bigger than a pin-hole, is large enough to admit the end of the little finger into a cavity by the side of the gut. Here you are to proceed in the following manner. The broad internal opening is always close to the sphincter muscle, and almost, if not quite, always at the posterior part, just opposite the point of the *os coccygis*. You must employ a probe bent in the manner I now show you, and introduce it into the rectum with the bent point towards the abscess. You then draw it down; and as you do so the point will enter the ulcerated cavity, so that it may be felt under the skin. You may now procure an external opening by puncturing the skin with a lancet so as to reach the point of the probe, after which the fistula is to be laid open in the usual manner. [The mode of performing these operations was illustrated by a diagram.]

There is another form of fistula of the rectum that requires especial notice. I do not know that I can better explain what I mean than by relating briefly the following case. A middle-aged lady had an abscess form in the front of the rectum. It was formed, I imagine, from ulceration of the gut in the usual manner. The abscess burst just by the posterior margin of the vagina, It appeared like a common fistula, and she consulted a surgeon, who inadvertently treated it as such, and laid it open into the gut. But what was the consequence? He had divided both the *sphincter ani* and the *sphincter vaginæ* muscles. The wound never perfectly healed; she was in the condition of a patient with lacerated perineum, and all the rest of her life was liable to an involuntary discharge of fæces, of course making her unfit for society, and in every way miserable. I saw this case some twenty-five years ago, and it has been a lesson to me, as you may suppose, ever since. It is not very often that abscesses of the rectum do burst in this situation; I have only seen a few examples of it; but the case I have mentioned was sufficient to satisfy me that some peculiar mode of treatment was necessary. How is such a case to be treated? I have seen this kind of fistula two or three times where I have had no opportunity of following up the management of the case; but rather more than a year ago a case occurred in which I was called upon to do so. I merely made a free division of the sphincter muscle, cutting across its fibres so as to set it completely at liberty. I dressed the wound to the bottom with lint. The sphincter in a great degree lost its power of retaining the fæces, and it was a long time before its functions were resumed. That was what I desired. The discharge from the fistula immediately became very much diminished, and it continued gradually to diminish further. When I last saw the patient, which was about two months ago, there was no discharge at all; and it appeared to me that the fistula was soundly healed. Why is it that the fæces get readily infiltrated into the internal orifice of the fistula? Because there is an obstruction to their exit occasioned by the sphincter muscle. By dividing the sphincter muscle you take away that obstruction, and the fæces escape so easily from the anus that they do not pass into the fistula. I must say, however, that I was led to adopt this plan of treatment partly from the well-known success of it in cases of simple ulcer of the rectum, and partly from what had been done in a case of another kind by another surgeon. Mr. Copeland says that he was consulted by a lady who had an ulcerated opening between the rectum and the vagina; that he divided the sphincter muscle, and set it completely at liberty; and that after some time the recto-vaginal communication was closed, and at last firmly cicatrised.

Having told you how these fistulous sinuses are to be laid open, let me say a few words about the dressing. If the operation be done in a proper manner, very little dressing is in general required, and indeed it is only a very narrow sore that is to be dressed at all. Do not cram the parts full of lint; all that you want is, to lay a little lint between the edges, to prevent them adhering prematurely. If the healing process goes on slowly, it may be useful to stimulate the surface by a dressing of the citrine, or red precipitate ointment. When the parts are fairly granulating, you may hasten the cicatrisation (that is, the formation of new skin) by touching the surface lightly with the nitrate of silver. It is seldom necessary, except in complicated cases, to continue the dressings for any considerable length of time; a few days are often quite sufficient. Indeed, after the cut edges are skinned over, the dressing is hardly necessary, and you may save both yourself and the patient a good deal of trouble by merely touching the surface of the sore every other day with the nitrate of silver, and using no dressing at all.

Let the cut edges be fairly skinned over, and the rest of the sore will cicatrise sooner without the dressing than with it. If you cram the part full of lint you give the patient a good deal of pain, and I am sure that it sometimes happens that, being obstructed by the pressure of the lint, the matter does not easily escape, but burrows in the cellular membrane, and makes fresh sinuses.

Abscesses sometimes occur about the rectum, which may be confounded with that particular disease which I have just described; and I shall say a few words on these cases, in order that you may distinguish them.

Suppuration sometimes takes place in an external pile. An external pile inflames; after a few days you are sent for to the patient, and you find an abscess just on the point of bursting. You open it, and let out perhaps a tea-spoonful, or more, of matter; but if you pass in your probe it will not penetrate by the side of the gut, and perhaps not further than half an inch. This sort of abscess is often very painful, and otherwise troublesome. The patient can hardly bear to go to the water-closet, and he has pain and difficulty in throwing out the last drops of urine. The treatment is very simple: for you may cure it at once radically by cutting off the external pile, abscess and all, with a pair of curved scissors. The same thing will sometimes happen with an internal pile. A patient has a pile of this description, which has protruded externally. Inflammation takes place in it, an abscess forms and bursts, and you may pass the probe into the abscess, and into the centre of the pile. Here, also, if the pile is small enough, the best way is to snip it off with a pair of scissors; or, if it be not small, tie a silk thread round its base, and destroy it by ligature.

I may mention to you a blunder which, in these last-mentioned cases, you will be liable to make if you are not on your guard against it. When you introduce the probe into an abscess formed in an internal pile, the probe very easily breaks down the slender wall of the abscess, and runs into the cellular tissue under the mucous membrane of the gut; and the cellular tissue gives so little resistance to the probe that it will pass any number of inches between the mucous membrane and the muscular tunic as easily as if it had penetrated into an actual cavity. I remember a case many years ago, where a surgeon, who was at that time of great eminence in this town, not being aware of this circumstance, laid open what he thought was a sinus two or three inches into the rectum. I am satisfied, from what I remember of the case, and what I have seen since, that it was an abscess formed in an internal pile, and that what he supposed to be a sinus was neither more nor less than a space he had made himself by running the probe into the loose cellular texture.

It is, I suppose, from the analogy of abscesses and fistulæ of the rectum, and from it being generally necessary that these should be laid completely open into the rectum, that some surgeons have been led to think that the same kind of operation is necessary for all kinds of fistulous sinuses wherever they are situated. I can remember the time when some very good surgeons in this town used to think that what is called fistula in perineo was to be treated in this manner. There can be no greater mistake. Fistula in perineo is formed in the same way as the fistula in ano, except that the one communicates with the urethra behind a stricture; and the other with the rectum above the sphincter muscle. A fistula in perineo is prevented from healing by some of the urine passing into it from the urethra. But the laying it open does no good, for it does not remove the cause which produced it. But this object may be attained simply by dilating the stricture, and in 19 cases out of 20 that is all you have to do. Generally by the time the stricture is dilated, the urine flowing more readily by the passage forward than it does through the ulcerated opening, it will not pass into the latter at all, and the fistula is healed by the time the stricture is dilated. If it should not be completely healed, you have only to keep the stricture dilated for a considerable time by introducing an instrument every day, or every other

day, and the sinus in the perineum will heal at last. If it be a large opening it may take some months to heal, but still it heals sooner or later. There is only one kind of case in which it is necessary to lay open a fistula of this kind, and that is where it is so circumstanced that neither the urine which enters it, nor the pus which it secretes, can freely escape, and a free incision is not only useful, but necessary.

There are fistulous sinuses which exist in the groin in connection with disease in the inguinal glands, and I can also remember the time when very good surgeons supposed that they required to be laid open like *fistulæ in ano*. It is true that if matter lodges in them, and cannot escape, they must be opened, or at any rate a counter opening will be required: for *no abscess will ever heal unless the matter escapes from it as fast as it is secreted*. But it is not the lodgement of matter which under ordinary circumstances prevents an abscess or sinus in the groin from healing. It is the diseased glands at the bottom of it. If you want the sinus to heal, you must either destroy the diseased glands, or bring them into a healthy condition; sometimes it may be worth while to dissect out the glands, or to destroy them by powerful escharotics, but in the great number of cases, if you attend to the general health, they recover of themselves, and so soon, and no sooner, will the sinuses in the groin heal.

The same observation applies to sinuses that are connected with dead bone. A sinus of this kind does not heal, but becomes fistulous, because there is disease at the bottom of it. If the dead bone comes away it will close at once. It is needless to lay open the sinus, to inject stimulating liquors into it, or to do anything else until the dead bone is removed: and then nothing more is wanted.

COLLEGE OF SURGEONS.

To the Editor of the Medical Gazette.

Sir,

In your number for January 20, I see a letter from Mr. Lee, in which he complains that he has not been honoured with a place in the first list of Fellows of the Royal College of Surgeons of England. Now, if Mr. Lee considers a little, he will find that there are others who have done something perhaps equal to his labours, and whose names are not to be found in the list. It is very well known that the Council had not the opportunity of including all the names they could desire in their first list, and there is every reason to believe that they did that which they considered to be fair and just: the list bears internal evidence of plan and design, and no plan could be acted upon that would please every body. I would advise Mr. Lee, and all others who consider themselves aggrieved by the selection of Fellows, to wait patiently for the second list, in which the names of those members who have by their labours extended the bounds of medical science will doubtless appear; but let such members bear in mind that making a book and extending science are not the same thing. Many a great writer has contributed but very little to the stock of solid knowledge; the founders of science should at least be considered equal to those who are the mere teachers of science. Our first men are the discoverers of facts, and the founders of recognised principles; then the highly instructed teachers and authors; then the senior members of high character. If members are placed on the next list who have nothing on which to found a fair claim for distinction, and men of publicly acknowledged talent are excluded, then there will be cause for complaint; but such it can hardly be thought will be the case.—I am, sir,

Your obedient servant,
A Twenty-eight Years Member of the College.

London, January 20, 1844.

QUACK ADVERTISEMENTS.

To the Editor of the Medical Gazette.

Sir,

The countenance afforded to quacks and quackeries is a standing complaint among all classes of our profession. I would suggest, therefore, whether you and other journalists are not doing much to encourage such delinquents by allowing the insertion of their "puffs" in your advertising sheets. I am induced to make these remarks by the notice of a sale of an infallible cure for gout, in your journal of Jan. 19. The same thing has occurred in the Lancet—(vide an advertisement by a Dr. Serney, who has published some mystifications concerning "two electric fluids," in Lancet, Jan. 13th.) Surely, sir, it is inconsistent with the dignity of either yours, or Mr. Wakley's journal, to admit advertisements which are only worthy of the pages of the Weekly Dispatch. I remain, sir, in the hope of inducing you to notice this subject,

Your obedient servant,
F. H. Ranking, M.D.

Bury St. Edmunds.

[We have nothing to do with the advertising department—controlling only the *body* of the journal, not the wrapper.—Ed. Gaz.]

THE NORTH DUBLIN UNION HOUSE.

Near to the Stoney-batter lies a group o huge gloomy edifices—an hospital, a peni-f tentiary, a madhouse, and a poor-house. I visited the latter of these, the North Dublin Union-house, an enormous establishment, which accommodates two thousand beggars. Like all the public institutions of the country, it seems to be well conducted, and is a vast orderly and cleanly place, wherein the prisoners are better clothed, better fed, and better housed than they can hope to be when at liberty. We were taken into all the wards in due order—the schools and nursery for the children; the dining-rooms, day-rooms, &c. of the men and women. Each division is so accommodated, as also with a large court or ground to walk and exercise in.

Among the men, there are very few able-bodied, the most of them, the keeper said, having gone out for the harvest time, or as soon as the potatoes come in. If they go out, they cannot return before the expiration of a month: the guardians have been obliged to establish this prohibition, lest the persons requiring relief should go in and out too frequently. The old men were assembled in considerable numbers in a long day-room that is comfortable and warm. Some of them were picking oakum by way of employment; but most of them were past work, all such inmates of the house as are able-bodied, being occupied upon the premises. Their hall was airy, and as clean as brush and water could make it: the men equally clean, and their gray jackets and Scotch caps stout and warm. Thence we were led, with a sort of satisfaction, by the guardian, to the kitchen—a large room, at the end of which might be seen certain coppers, emitting, it must be owned, a very faint inhospitable smell. It was Friday, and rice-milk is the food on that day, each man being served with a pint-canful, of which cans a great number stood smoking upon stretchers—the platters were laid each with its portion of salt, in the large clean dining-room hard by. "Look at that rice," said the keeper, taking up a bit, "try it, sir, it's delicious."—I'm sure I hope it is.

The old women's room was crowded with, I should think, at least four hundred old ladies—neat and nice, in white clothes and caps—sitting demurely on benches, doing nothing for the most part; but some employed, like the old men, in fiddling with the oakum. "There's tobacco here," says the guardian in a loud voice, "who's smoking tobacco?" "Fait, and I wish dere *was* some tabacky here," says one old lady, "and my service to you, Mr. Leary, and I hope one of the gentlemen has a snuff-box, and a pinch for a poor old woman." But we had no boxes; and if any person who reads this visit goes to a poor-house or lunatic asylum, let him carry a box, if for that day only—a pinch is like Dives's drop of water to those poor limboed souls.—*Titmarsh's Irish Sketch-book.*

[The wretched diet of our Union Work-houses has long been a subject of complaint among English philanthropists; but such is the unutterable misery of the Irish poor, that no poor-law commissioner can outbid it; and even boiled rice may rank as a luxury at Dublin!—Ed.]

THE DATE-TREE.

The extensive importance of the date-tree is, says Dr. Clarke, one of the most curious subjects to which a traveller can direct his attention. A considerable part of the inhabitants of Egypt, Arabia, and Persia, subsist almost entirely on its fruit. They make a conserve of it with sugar, and even grind the hard stones in their hand-mills for their camels. In Barbary they form handsome beads for paternosters of these stones. From the leaves they make couches, baskets, bags, mats, brushes, and fly-traps; the trunk is split and used in small buildings, also for fences to gardens, and the stalks of the leaves for making cages for their poultry. The threads of the web-like integument at the bases of the leaves are twisted into ropes, which are employed in rigging small vessels. The sap is obtained by cutting off the head of the palm and scooping out a hollow in the top of the stem, where, in ascending, it lodges itself. Three or four quarts of sap may be obtained daily from a single palm, for ten days or a fortnight, after which the quantity lessens, until at the end of six weeks or two months, the stem is exhausted, becomes dry, and is used for firewood. This liquor is sweetish when first collected, and may be drank as a mild beverage, but fermentation soon takes place, and a spirit is produced, which is distilled, and forms one of the kinds of aruk (arrack) or spirit of Eastern countries. Such being the importance and multiplied uses of the date-tree, it is not surprising that in an arid and barren country it should form so prominent a subject of allusion and description in the works of Arab authors, and that it should be said to have 300 names in their language. Many of these are however applied to different parts of the plant, as well as to those at different ages.—*Miss Burnett's Illustrations of Useful Plants.* January, 1844.

[We are glad to find that this agreeable work continues to prosper. It has now reached its fifty-first number.—Ed.]

OBSCURE CASE OF SUPPOSED INFANTICIDE.

By MM. Thibaud, Thuillier, and Montanceix.

A woman asserted that she had delivered herself of a dead fœtus on the 24th of September; that she placed it in brandy the same day, took it out on the 26th, and replaced it on the 27th; and that on the 29th she took it, for the last time, out of the brandy, and immediately put it into spirits of wine, where it remained till the 12th of October, when it was taken out of the vessel to be submitted to scientific examination. The question to be solved was, how long the fœtus had been in the alcohol; and whether the spirits of wine would have been able, in the supposed time, to produce the observed effects? The *experts* endeavonred, in their experiments, to reproduce the precise circumstances in which the fœtus submitted to their examination had been placed. They concluded from them, that the fœtus was in the beginning of the seventh month of intra-uterine life, and that it was not the one of which the woman said that she had delivered herself on the 24th of September.—*Annales d'Hygiène;* and *Gazette Médicale.*

A DANISH MEDICAL JOURNAL.

We take shame to ourselves for not having sooner noticed an excellent foreign journal, of which fifteen numbers are now lying before us. It is published at Christiana, in the Danish language, every two months, each number containing about 100 pages. It is entitled *Norsk Magazin for Lægevidenskaben, udgivet af Lægeforeningen i Christiania.* The names of the editors are Chr. Boeck, A. Conradi, Chr. Heiberg, J. Hjort, and F. Holst.

Should we be favoured with any more numbers, the editors would add to the obligation by sending a translation of a couple of articles into English, French, or German; as the Scandinavian languages are, unfortunately, but little studied in this country.

We cordially wish the *Norsk Magazin* the success which it so richly merits.

ON THE EMPLOYMENT OF COCHINEAL IN THE TREATMENT OF HOOPING-COUGH.

Dr. Cajetan Wachtl, of Vienna, treated nine children, suffering from hooping-cough, with cochineal, as recommended by certain English physicians. The remedy was administered in all stages of the disease; and its efficacy was so instataneous and constant, that, notwithstanding the paucity of cases, Dr. Wachtl feels authorized to regard cochineal as a specific in hooping-cough. The following is his manner of exhibiting the remedy:—Take of cochineal, one scruple; sugar, one ounce.—Dissolve in six ounces of warm water. The dose is three tea-spoonfuls in the twenty-four hours.

The solution ought not to be kept longer than thirty-six or forty-eight hours, because after that time it assumes a brown hue, and a sour taste, which renders it unfit for use.—*Pharmaceutical Journal.*

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS.

The annual dinner of this Society is appointed to take place on the 20th of February (Shrove Tuesday). It is hoped that H. R. H. the Duke of Cambridge will take the chair.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, Jan. 18, 1844.

H. Willats, Reading, Berks.—Lord Huntley.—David Graham Niven, Pershore, Worcestershire.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, January 13, 1844.

Dropsy, Cancer, and other Diseases of Uncertain Seat	96
Diseases of the Brain, Nerves, and Senses	134
Diseases of the Lungs and other Organs of Respiration	332
Diseases of the Heart and Blood-vessels	29
Diseases of the Stomach, Liver, and other Organs of Digestion	57
Diseases of the Kidneys, &c.	3
Childbed	4
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	1
Arthritis	0
Rheumatism	2
Diseases of Joints, &c.	1
Carbuncle	0
Phlegmon	0
Ulcer	2
Fistula	1
Diseases of Skin, &c.	0
Old Age or Natural Decay	62
Deaths by Violence, Privation, or Intemperance	10
Small Pox	20
Measles	23
Scarlatina	51
Hooping Cough	32
Croup	9
Thrush	4
Diarrhœa	5
Dysentery	1
Cholera	0
Influenza	3
Ague	0
Remittent Fever	0
Typhus	34
Erysipelas	6
Syphilis	1
Hydrophobia	0
Causes not specified	6
Deaths from all Causes	929

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, FEBRUARY 2, 1844.

ON DIFFERENT FORMS OF GRANULAR DISEASE OF THE KIDNEY.

By J. D. Heaton, M.D.

(For the Medical Gazette.)

The following cases are, I think, of sufficient interest to be worthy of insertion in your journal; they are taken, with the accompanying remarks, from the Fellowes' Prize Reports by myself, of cases which occurred in University College, London. Those which I shall first offer are some cases of different forms of granular disease of the kidney, of which several cases occurred together.

Joseph Wilson, admitted under Dr. Williams, June 7, 1841, 45 years of age, occupation, a house-painter; a married man, middle stature, sallow complexion, dark hair. His general health has been good; his habits quite temperate.

About a month ago, he caught a severe cold, which laid him up for some days. It was while recovering from this, and a day or two after returning to his work, that he first perceived his body to swell without any apparent cause, as he felt in pretty good health. He continued at his work a few days, but as the swelling increased, and he began to feel exceedingly weak and languid, though without any pain, he was obliged to discontinue his occupation. He had no palpitation at the heart, nor pain in the chest, nor in the loins, or any other part. His water was more scanty than usual, and of a high colour, but clear; his bowels were constipated till he took some medicines by medical advice, which purged him profusely. After this he was salivated, but still continued getting worse, and more dropsical. While under the effects of mercury, he caught cold, and had a severe cough with much expectoration. Two days before admission, he first experienced a sharp lancinating pain in the right chest, shooting between the shoulder and the sternum.

At the time of his admission, the symptoms were as follows:—The feet, legs, and thighs, were highly œdematous, pitting deeply on pressure; the penis and scrotum were distended with serum; the abdomen was anasarcous, with distinct fluctuation, but without tenderness; the upper extremities were also œdematous, but the face not so. There was an ulcer on the right shin, which formed spontaneously three months ago, and still continued open. He complained of much dyspnœa; the respiration was short and hurried; he had some cough, but this was less troublesome than it had been, and there was little expectoration: he could breathe most easily whilst lying on the right side. He still suffered from the pain in the right side, increased by a deep inspiration. The tongue was covered with a dark brown fur, moist, but adhesive; the gums presented the effects of mercury, and the breath had a strong mercurial fœtor. The bowels were much purged from the effects of medicine taken previously, the stools having a natural fæculent colour. The urine was very scanty, rather turbid, of a high colour, and gave a very copious flocculent precipitate with the usual tests for albumen; its sp. gr. 1032; it slightly reddened litmus paper. Much headache; pulse frequent, small, and feeble; surface dry and unperspiring. The respiratory movements of the chest were more extensive on the left than on the right side; the latter being fixed in a distended state, and the subclavicular spaces being unusually resonant, but completely dull in the inferior and lateral parts: on the left side the stroke sound had the usual resonance. On each side, under the clavicle, the respiration is tubular, especially under the right clavicle, where the respiratory murmur is almost entirely absent; at the inferior angle of the right clavicle œgophony is distinguishable. The sounds of the heart are natural, with

the exception of a slight roughness heard at the base with the first sound.

Lateri dextro admoveatur emplast. Canth.

℞ Pilulæ Hydrargyri, gr. iij.; Ext. Hyoscyami, gr. ij.; Pulv. Scillæ, gr. j. M. ft. pil. ter die sumenda. Bibat. Potum. Potas. Bitart. ad lib.

8th.—Not much change in the symptoms; stools liquid; urine very scanty, dark-coloured, and turbid; highly albuminous. Tongue rather dry. Pain in the chest relieved by the blister.

Rep. Pilula c. Pulv. Digitalis, gr. ss. vice Pil. Hydrarg.

℞ Tinct. Cantharidis, ℥x.; Liquoris Potassæ, ℥xx.; Sp. Ætheris. Nit. ʒj.; Mist. Camph. ʒj.; M. ft. haust. ter die sumendus.

10th.—No improvement in the symptoms. The countenance pale, and expression very anxious. The pain in the chest more severe; respiration short, painful, and principally abdominal. Still much diarrhœa. Tongue brown and adhesive; pulse 100, with some sharpness, but small and feeble. The urine presenting the same appearances as before; very scanty, not amounting to more than two or three ounces in the 24 hours. Body chill, but slightly perspiring.

Fiat Venæsectio, ad xij.

Foveatur abdomen c. Decoct. Papav. Calido.

11th.—The blood drawn yesterday presents a moderately firm coagulum, but is neither cupped nor buffed, which, however, may depend on the great slowness with which it flowed when drawn; the serum very small in quantity. The patient seems relieved by the bleeding; the countenance is less anxious; the pain and tenderness of the body are diminished, and the abdomen seems less tense. No increase in the amount of urine.

Aug. Tr. Canth. ad ℥xv. in sing. dos.

Lateri dextro admoveantur Hirudines, xij.

12th.—Considerably worse; countenance pale and anxious; tongue brown, and quite dry; sordes collecting on the teeth; pulse 100, very small and feeble. The cough is more troublesome, and accompanied with a rusty viscid expectoration, having some streaks of blood. The physical signs afforded by the chest are similar to those previously described, but those indicative of effusion in the right chest are still more marked; the respiration, and even the stroke sound in the upper part, having quite a tubular character as the patient lies on his back. Diarrhœa still profuse; no increase in the quantity of urine.

℞ Decoct. Scoparii Co. ʒiv.; Potass. Nitratis, gr. x.; Sp. Æther. Nit. ʒj. Sodæ Sesquicarb. gr. x. M. ft. haust. ter die sumendus.

14th.—Some improvement in the patient's general appearance, with a slight increase in the amount of urine since the use of the last medicine, but it is still highly albuminons. The diarrhœa still continues. The pulse has fallen to 90, and has rather more strength; the tongue brown, but quite moist. The cough is very troublesome, and he complains of much dyspnœa; but there are no head symptoms. Very slight perspiration.

℞ Pulveris Antimonialis, gr. iij.; Pulv. Ipecac. Co. gr. vj.; M. ft. pulv. omni nocte sumendus.

16th.—The improvement mentioned in last report still seems to continue in the general symptoms, but there is no increase in secretion of urine, which does not amount to above three or four ounces in the twenty-four hours; it is very dark in colour, turbid, and has a strongly urinous mixed with an ammoniacal odour; it is highly albuminous, and has a sp. gr. of 1021. He is still much purged; the tongue furred, but moist; skin unperspirable.

Repetatur Haust. c. Tr. Opii. ℥v. vice Potas. Nitrat.

17th.—The symptoms continue much the same; the diarrhœa is rather diminished by the opium. The signs of effusion in the right chest are still well marked. The œgophony has ceased; there is a slight friction sound in the right mammary region. Cough very troublesome. The whole surface is œdematous; there is much œdema about the neck, and probably to this may be ascribed a choking sensation, as of pressure on the throat, of which he complains.

18th.—Seems considerably worse, the physical depression being much increased since last report, though without distinctly typhoid symptoms.

19th.—Extremely depressed; answers are given in a low whisper; feels confused in the head, and very drowsy, but is unable to get any sleep. Seems much choked with mucus in the air passages, which he has not strength to expectorate. Pulse 100, very small and feeble; tongue brown and quite dry. What urine is passed dribbles away involuntarily; the last which was collected has still a very copious precipitate on the addition of nitric acid, but ebullition causes no precipitate, without nitric acid, which shows some singular change in the property of the albumen contained, which has not been the case on previous examinations. The diarrhœa still continues, and the urine like the stools are discharged unconsciously. The body seems still more distended by the dropsical effusion; the wounds in the arm from venesection remain unhealed, and now form open ulcers discharging a thin watery pus.

Adde Haustui Potas. Acet. ʒss.

21st.—Evidently near his end. The

countenance pale, face shrunk, and having an anxious expression. Respiration moaning, and very short and hurried; the voice reduced to a feeble whisper. He gives intelligible answers, but appears heavy and confused, and gets no sleep. Tongue dry and brown; pulse 120, scarcely perceptible. The body is quite dry, but there is a copious perspiration from the head. The excretions are passed involuntarily.

He died about ten o'clock this evening.

Inspectio cadaveris, post-mortem horas xv.

External appearance.—The body highly œdematous in all parts, except the face. The ulcers in the leg, and on the arm from venesection, covered with a thin watery discharge. The abdomen and right chest distended with fluid.

When the *thorax* was opened, some pints of clear serum escaped principally from the right side. Flakes of greenish semi-purulent lymph covered the lower part of the right pleural membrane, which presented much inflammatory injection when the lymph was removed, and there was a similar appearance, though in a smaller degree, on the left side.

The *right lung* was somewhat condensed and injected throughout, and less crepitant than usual. Near the apex were groups of miliary tubercles of considerable firmness; and numerous miliary granulations were scattered throughout the whole lung. The lower lobe of this lung was much condensed, and was the seat of inflammation of a lobular or distinctly circumscribed character. A section of this part showed the great mass of the lung of a dark red colour, but interspersed in this were numerous patches of irregular shape and size of a more fluid red; these were quite solid, sinking in water; but when torn they presented a uniform surface without any granular appearance, presenting that state to which the name of carnification has been applied.

The *left lung* was attached to the walls of the chest posteriorly by firm old adhesions. It was much congested throughout, but without any of the tubular inflammation seen in the other lung. The substance of the lung was soft and easily torn, and much frothy serum oozed from the cut surfaces when compressed. Near the apex was a portion completely dense and consolidated, the tissue of the lung being puckered around. Miliary tubercles were scattered through the upper lobe. The bronchial lining membrane in both lungs was injected, and in some parts considerably hypertrophied.

The *pericardium* contained much fluid; the heart was free from disease.

The *right kidney* was slightly enlarged; soft and flabby and easily lacerable, the capsule easily removed, but bringing with it small portions of the glandular substance, which had a pale, brownish-yellow colour, interspersed with lighter albuminous patches; some parts of the surface almost smooth, others finely granulated; the albuminous patches extended through the depth of the cortical structure, but did not much invade the tubular part. There was little difference of colour between the tubular and cortical structures, being pale and faded throughout, marked, however, in the cortical part, by numerous stellated spots of vascularity.

The *left kidney* was larger than the right, and more soft and easily lacerable, as well as more granular. The granulated appearance, in the right kidney confined to the cortical, here dipped into the tubular structure between the separate cones: some of the tubes appeared distended with the morbid deposit. The stellated vascularity was more marked in this than the right kidney.

The right kidney weighed 5½ ounces; the left 7 ounces.

The liver was rather small; yellower than usual, and of a paler colour; the central red points of the individual lobules, formed by the intra-lobular hepatic veins, appeared smaller than usual, and surrounded by a larger, pale cortical portion. The weight was 3lbs. 5 ounces.

The peritoneal cavity contained a considerable amount of serum. The intestines presented much vascularity throughout.

The symptoms here are almost all referrible to the granular disease of the kidneys, of which this case is a good illustration; it may be considered as an instance of the acute disease, for not more than five weeks intervened between the time when the dropsy first attracted his attention, and his death. Exposure to cold seems to have been the exciting cause of his disorder, and this may have determined the thoracic complication, though the disease itself strongly predisposes to inflammatory affections of various parts, and particularly of serous membranes. Previously to his admission into the hospital he seems to have been treated for the dropsy simply, without any reference to the cause of this, viz. the disease in kidneys, and probably the mercurial treatment adopted was injurious rather than beneficial. The dropsy was very general, though it did not, as it frequently does in this complaint, extend to the face. The effusion in the chest, though it might be increased by the general tendency to effusion throughout the body, yet was evidently of an inflammatory nature, being accompanied with many of the general symptoms of pleurisy, and being confined principally to one side of the chest, on which side, also, the crepitation which was heard at one time shewed the presence of pneumonia. The low character of

the inflammation, as well as its obstinacy, must be regarded as depending on the impure state of the blood, impregnated with the urea which the kidneys, in their diseased state, were unable to separate.

The diarrhœa which existed at the time of the patient's admission, having been excited, in the first instance, by the administration of powerful purgative medicines, continued till his death. This is a frequent, and, in unfavourable cases, often a troublesome symptom in this disease: though unfavourable when obstinate, yet it is perhaps not in itself injurious: where remedies prove beneficial, the administration of purgatives is one of the most useful means, and when diarrhœa is set up, or continued spontaneously, it may probably be fairly regarded as an effort of nature to remove part of the fluid from the blood, and perhaps also some of the injurious principles, especially the urea, which should be eliminated by the kidneys. Hence this symptom may be regarded as unfavourable, rather as shewing the continued inefficiency of the kidneys, and from its obstinate and troublesome character, than injurious in itself. The remedies administered to relieve this symptom were certainly not powerful, as it was feared that the sudden stoppage of the diarrhœa might aggravate the other symptoms.

The complete absence of local symptoms in the kidneys is remarkable, and shows that these are by no means essential even to a severe and acute form of this serious disease of those organs; but the characters of the urine gave decisive evidence of the true nature of the affection. Not merely the serum of the blood was allowed to pass through the diseased structure of the kidneys with the urine, but probably also some of its colouring matter, giving to the urine its deep colour. The sp. gr. was rather higher than that of healthy urine at the time of his admission, but when we consider its very small quantity, and also the large amount of albumen which it contained, we shall see that the urea and other principles contained in healthy urine must have been retained in the blood, and indeed before death the sp. gr. fell below the healthy standard. In these cases urea may be easily found in the serum of the blood, and proves a dangerous poison when so retained; whether lithic acid, separately or in combination, be also to be found in the blood in this disease, and what its effects are on the system, have not been so much investigated. The alteration in the albuminous principle contained in the urine at one period, rendering it incapable of coagulation by heat, though still acted on by nitric acid, was remarkable, and worthy of consideration: the observation was too carefully made to be liable to mistake.

Death, in these cases, seems dependent on the poisonous effect of those principles retained in the blood; the poison appears to act principally on the brain; headache and stupefaction, gradually passing into coma, usually precede death for some days. In this case, however, there was a remarkable absence of these head symptoms, and the symptoms which preceded the fatal event more resembled those of the last stage of typhus.

The impure state of the blood was further indicated by the inability of the system to establish the ordinary reparatory process, shown by the unhealthy appearance of the wounds in the arm produced by venesection.

Little remark is required with regard to the treatment adopted.

The serious general symptoms, and the very small quantity of urine that was secreted, and its highly albuminous state, led to an unfavourable prognosis from the time of his admission; and it seemed probable that the opportunity for active local depletion was already passed; various remedies were tried to increase the action of the kidneys, but without effect. The treatment for the removal of the inflammation in the chest was likewise not very successful; the general disorder forbade the use of very active measures, and, at the same time, increased the tendency to low inflammation.

The *post-mortem* appearances were such as would naturally be expected from a consideration of the symptoms during life. The marks of inflammation in the right chest, both pleuritic and pneumonic, very well corresponded with the symptoms and signs observed previously. In the left chest the stroke sound had been quite resonant when examined during life; the stethoscope, also, had not disclosed the signs of pulmonary congestion; still this state was found to exist in a considerable degree when the body was opened. It is probable, therefore, that this supervened only shortly before death, being a kind of engorgement which very frequently supervenes in the last stage of fatal diseases when the respiration is carried on very imperfectly for some time before death; being the state to which Laennec has given the name of *pneumonia ugonizantium*.

The pale colour of the liver, and its small size, probably depended on a morbid deposit having a tendency to contract, similar to that of cirrhosis: some reference may be made again to this subject in speaking of another case.

The appearances in the kidneys were such as usually present themselves in acute fatal cases of granular disease of the kidney. Various opinions have been entertained as to the nature of this disease: some remarks will be made on this point after giving the other reports of similar cases.

Leeds, Jan. 1844.

CLINICAL REPORT

OF THE

BRITISH DISPENSARY IN SYRIA.

To the Editor of the Medical Gazette.

SIR,

IN the MEDICAL GAZETTE for the 17th of March, 1843, you were kind enough to publish the "Clinical Report of the British Dispensary in Syria"—the first ever transmitted from the Levant; and as every thing connected with the east is viewed with increasing interest, I doubt not a further account of our proceedings will be acceptable to your readers. Not to trouble you, however, with too lengthy an address, I must refer those who are unacquainted with the climate and general condition of Palestine to my former remarks, and to the published "Transactions and Reports of the Syrian Medical Aid Association."

I am sure it will be gratifying to you to learn that the efforts of our agent here have succeeded; and that by his assiduity, good conduct, and professional skill, he has secured the entire confidence of the people. During the first six months of his residence, he relieved, under every disadvantage, 623 males, and 674 females, which, added to the returns of the two succeeding quarters, as included in the following table, make a total of 4298 cases for the entire year, *i. e.* up to last September; and he has performed several important surgical operations to the perfect satisfaction of all parties.

Report of the British Dispensary at Beyrout, Syria, from December 1842 *to September* 1843 *:—*

	Cases.
Ophthalmia	993
Purulent ophthalmia	16
Pterigium	12
Eutropium and ectropium	35
Cataract	22
Amaurosis	5
Intermittent fever	313
Continued fever	144
Puerperal fever	10
Rheumatism	429
Pneumonia and bronchitis	284
Phthisis	5
Inflamed tonsils	9
Dyspepsia	14
Diseased liver	46
Dysentery	62
Diarrhœa	35
Dropsy	3
Paralysis	18
Spinal diseases	4
Urinary diseases	63
Hysteria	4
Catamenial derangements	54
Eruptions	190
Worms	112
Cancer	8
Hernia	19
Hydrocele	3
Syphilitic complaints	16
Abscess	37
Ulcers	282
Tinea capitis	23
Hare-lip	5
Club-foot deformities	4
Deafness	47
	4181
Cases not noticed above	117
Total during the Twelve Months	4298

Remarks upon the above report.

Ophthalmia.—"The universal prevalence of eye-diseases in these countries," observes Dr. Kerns, "will prepare the Committee for the large number of cases under this head, in which I have included every stage of the disease, from simple conjunctivitis to ulceration or opacity of the cornea, any subdivisions appearing useless. The disease, if neglected, or improperly treated, rapidly runs its destructive course; and the treatment adopted by the natives being mere quackery, the lamentable results are to be seen everywhere. It is difficult to assign the chief cause of ophthalmia in these countries, as it is to be found among all classes of every age, and under the most opposite circumstances. Exposure by sleeping in the open air, poverty, and want of cleanliness, have each, in turn, been named as the cause; but many cases have come under my notice to which none of these causes could apply. I am inclined to think that exposure to the unsubdued light of the sun, arising from the peculiar head-dress, is amongst the most fruitful causes of this disease*.

Purulent ophthalmia is not a very frequent, but, as elsewhere, a very formidable disease; but if taken in time, it yields to the nitrate of silver and ordinary treatment.

* See my remarks on this subject in my last communication, (MED. GAZ. for March 17th, 1843.) Chronic disease of the eyes in Syria and Egypt is comparatively rare; for inflammation, if neglected (as it too frequently is), runs its course so rapidly that patients sometimes lose their sight in three days. The Mohammedans, being fatalists, trust everything to Providence, and often do nothing to help themselves. If they interfere at all, their plan is to take castor-oil, or some milk which has been allowed to stand on the pulp of the "bitter apple." Sometimes they apply the actual cautery, or scarify the back of the neck by means of a razor and a buffalo's horn—a very primitive but effectual mode of cupping: and they have recourse to the bath. But their treatment, as in every other case, is generally counteracted by inattention to diet, or by the most reckless exposure to the sun's rays. Young men very commonly put out their right eye that they may avoid the Conscription.—W. HOLT YATES, M.D.

Entropium is frequently met with, and I have operated with success in several instances.

Cataract.—Of 22 cases I operated on about 10, with various degrees of success. Some succeeded to the utmost: two were lost by subsequent inflammation, the patients having returned home; and as they lived at considerable distances, were of course beyond my reach. One completely successful case was a man nearly 70 years of age. He resided nine hours' distant from me, on Mount Lebanon. He subsequently came to see me at intervals; and on two occasions led other blind men to my dwelling, that they might obtain similar relief*.

Intermittent fever.—For this disease it is difficult to assign an evident cause. Marsh miasmata is out of the question where the land is parched with drought one half of the year; and at no period, in this district, are marshes or stagnant pools to be found of any extent: however, if we omit the association of marsh, which is but a casual circumstance, the theory of decomposed animal and vegetable matter will remain as probable as any other, and as applicable. These effluvia are often more offensive from the absence of water. The disease is here foun damong persons of all classes and all ages, and in many cases it recurs several times when the patient is supposed to be quite well. In such, change of air, either from the plains to the mountains, or the reverse, is attended with the most beneficial result. In cases of long standing, quinine appears to lose its effect. A gentleman told me, some time since, that he had finished an ounce bottle of sulphate of quinine, and yet ague still hung upon him, appearing at regular intervals†.

Continued fever is generally of the common inflammatory form. I have met with very few cases which assumed a typhoid character. In persons of an ordinary full habit, fever in this country sometimes runs on rapidly to a fatal termination. The practice of the natives betrays lamentable ignorance, often consisting of the use of rose water, or some other useless article; but fortunately they are fond of bleeding, which, though sometimes injudiciously had recourse to, in many cases proves the sole means of saving life.

Rheumatism arises, in a great measure, from the habit of sleeping on the ground, upon only a mat or rug; and of course any other exposure to night or damp.

Pneumonia and bronchitis may also be justly ascribed to exposure, by sleeping in the open air, and to imprudence when heated to excess by exertion under a hot sun.

Pulmonary consumption is a rare disease in Syria. For patients thus afflicted, or having what is usually understood by "delicate lungs," if I may form an opinion after a single year's residence in this country, I think the winter climate cannot be surpassed by any other for salubrity.

Dyspepsia.—This complaint is very prevalent here, in some form or other, and appears to arise from the very large proportion of vegetables cooked with oil, which constitute the food of the natives, and the habit of eating unripe fruits.*

Diseased liver is by no means so frequent as might be expected from the prevalence of ague. But the people in general are sober: ardent spirits are little used.

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* In Mohammedan countries, disease is believed to have been sent by "Allah" as a punishment for sin; therefore it is accounted presumptuous to attempt to eradicate it; but if a "Hakkim" passes by, the afflicted kiss the hem of his garment with superstitious veneration, and beseech him to "lay his hands on them, and heal them;" for every one who has the *gift* of healing" is regarded by them as a man "sent from God," and they often call him "the man of God." They belleve that he has the power to minister to all their necessities, and that he must be a good man to be endued with such power. If he refuse to help them (because it may be the case is hopeless) they think that "Allah" forbids him: but, on the other hand, if happily he cures them, they thank not him. but "Allah." "Thanks," they say, "are due only to the Most High; all men are equal in the eyes of God, but it is a duty and a privilege to help our neighbour." They show their gratitude to man by acts; they thank God in prayer, and call down blessings on their benefactor! But they have no notion that the art of healing the sick may be acquired or taught.—W. Holt Yates, M.D.

† In obstinate cases of ague, I have found a combination of five minims of the liquor arsenicalis with two grains of sulphate of quinine, taken every four or six hours during the interval, cut short the paroxysm, when quinine or the liq. arsenicalis *alone* has failed. The chief causes of fever are unquestionably, I think, sleeping in the open air, exposed to the heavy dews of the night; and the effluvia arising from vegetable matter which has been washed down from the neighbouring heights by the torrents in the rainy season, and left to decompose during the intense heat of summer. Dr. Kerns forgets that although there may be no "stagnant pools" on the shelving grounds between the sea and the mountains, there is abundance of moisture; for in these countries, the dew falls so heavily after sun-set, and so fast, that unless a man be duly prepared for it, it would wet him through in half an hour. Accordingly, we find that fever is most prevalent during the summers, and the resident merchants retire to the villages of Lebanon to avoid them. The effluvia generated by the putrid matter is always rendered most active when there is a combination of heat with a moderate quantity of moisture.—William Holt Yates, M.D.

* Add to this almonds and cinnamon, which are mixed up abundantly in almost every dish; the practice of treating their friends with sweetmeats, and the abuse of coffee and tobacco. Moreover, the females become corpulent, dyspeptic, and sallow, for want of exercise. I was once called to the Harem of one of the Druse Emirs of Lebanon. I found the "Princess Royal" rolling about on the divan in great pain, in consequence of having partaken too freely of "raw liver," and other similar dainties. Her attendants were fanning her, and bathing the soles of her feet with rose water!—William Holt Yates, M.D.

Dysentery is not more frequent than might be expected from the number of dyspeptic patients.

Dropsy, as far as I have yet seen, is decidedly a rare disease in this country.

Paralysis.—Of the cases enumerated, some were affected in the hand and foot; some the two feet; some the two hands; and ohters the muscles of the face. I have tried electricity, and electro-magnetic influence in some cases, with decided advantage; but not always.

Urinary affections. — These depended chiefly on irritation of the bladder. Chronic disease of its lining membrane is rather frequent; and, I think, arises from the excessive use of unripe fruit.

Hernia.—I have not yet met with a single case of strangulated hernia; but by means of the trusses which the Committee kindly sent me, I have been enabled to afford relief in several very distressing cases.

Ulcers, from whatever cause, are prone to assume a chronic character, and become exceedingly difficult to heal. I seldom find any benefit from oily applications: the remedies which I generally employ are astringents. There is a peculiar ulcer known here as the "Aleppo button," from its great prevalence in Aleppo.* It occurs but once, and is, for the most part, confined to one ulcer, beginning as a common pustule on the cheek, and extending to the size of a shilling or a half-crown. It runs its course in about twelve months; and, from all I can learn from the most intelligent residents in this country, it appears to resist every kind of treatment, *until the usual time*; after which it dries up, very frequently leaving a deep scar on the face. I have not yet had sufficient opportunity of investigating its nature, or of ascertaining the most suitable treatment, as few cases have come under my own observation, and the patients only paid me a few visits. In such cases the want of an hospital is very manifest.

Hare Lip and *Club Foot* deformities are not common. I have operated successfully on those which came under my care, and to the no small astonishment of both patients and friends!

Syphilis is not prevalent in this country. The cases which came under my notice ever generally of a mild character. How far the observation may be justified I know not, but this whole class of diseases is designated by the natives "Habbeh Frangee," the "Frank disease," or ("Button.")

Cancer.—I have only had one case which admitted of an operation, and this of a trivial nature. The other cases had been long subjected to the irritating "nostrums" of the country.

The past twelve months have not been marked by any unusual sickness, and I believe we had no visitation of plague, though two cases were reported; but from their history and result, there is much reason to doubt its correctness.*

I regret that it is not in my power to make my report more satisfactory, by adding the result and detail of cases; but this I find quite impracticable, owing chiefly to the inconvenient distances which a great portion of the people come, and the unfavourable circumstances under which they are seen when they do come. I will attend to the suggestions of the committee, as far as circumstances permit; but in the present state of the country, I do not think a *post-mortem examination* at all practicable. Indeed, unless some such powerful influence as that of Mehemet Ali be enlisted in its favour, I think the day is yet far distant.

I forbear to make any comment on the above, beyond the few short notes which I have introduced *en passant*, especially as I have enlarged upon all these subjects in my recent work on Egypt.*

Dr. Kerns has not yet been in Syria a year and a half; nevertheless, he has collected some very valuable statistics; and, indeed, accomplished so much, that, as far as he is concerned, the undertaking is clearly no longer an experiment: its practicability is proved beyond a doubt. The records of the charity, supported as they are by the testimony of recent travellers, and of the resident merchants (who have been eye-witnesses of Dr. Kerns' labours) afford a convincing proof of the utility of the Institution; more particularly as in that widely extended territory (including a population of two millions) there is scarcely any resource besides that which the Association has provided. The Dispensary House at Beyrout is beset at all hours by persons of every denomination who are anxious to obtain advice for themselves or relatives. Many have to traverse the rocky regions of

* See Russell's "History of Aleppo," and his "Treatise on the Plague of Aleppo;" also "Maundrell's Journey from Aleppo to Jerusalem."

* It is very commonly reported that *the* plague is raging in a particular district, when fever or any other epidemic prevails, or is unusually fatal, because (as I have already stated) the natives regard every severe malady as a plague sent as a judgment from above. The Copts and Arabs believe that every person who dies in Egypt, no matter how young or old, falls a victim to the true plague, and assert that this has been the case ever since the Angel of the Lord "smote the first-born." Hence they call the disease "Taun," which signifies "the wound of a lance," and they think that the blow with a lance is inflicted by the destroying Angel.

The more experienced European residents understand by "a plague" *a great deal of sickness.*

WM. HOLT YATES, M.D.

* "The Modern History and Condition of Egypt: its Climate, Diseases, and Capabilities, &c. 2 vols. 8vo." Smith, Elder, and Co. 1843

Lebanon, a distance of thirty and forty miles, whilst others come even from Damascus, because in that great city there is not a single medical man who has the slightest claim to their confidence; those who profess the "healing art" being either "charm venders," "magicians," or "adventurers!" The following extract of a communication from Dr. Kerns, dated Nov. 10, 1843, affords a striking illustration of this.

"In compliance with the wish of the Committee that I should make a visit of inquiry to Damascus, I have done so, and just returned. I stayed a fortnight there, and saw several patients. There are no European physicians or surgeons, except Italians and Poles, who, in this country, are generally *mere quacks*. I have no doubt but a physician would be well received there, but his expenses would be little less than at Beyrout.

"During my stay I was called to attend the lady of a Scotch missionary in the capacity of accoucheur. This being her first confinement, she was very anxious, and regarded my opportune visit as a providential circumstance. I had the pleasure of leaving both mother and child well.

"The road from Beyrout to Damascus is very bad; it lies across the Lebanon and Anti-Lebanon mountains, and the journey took me two days and a half. Whilst travelling, I witnessed a curious specimen of Syrian surgical practice. A man fell from a walnut-tree, a height of 30 feet: his arm was broken, and his body severely bruised. On taking him up, the people instantly killed a sheep, and stripping off the patient's clothes, wrapped him up in the warm sheep-skin (the fleshy side inwards), *broken bones and all*, like a mummy! I saw him twelve hours after the accident, and he was then *steaming* in his new dress. Hearing who I was, they very gladly availed themselves of my services, and I left them quite satisfied with a more enlightened plan of treatment. I am happy to say my dispensary goes on prosperously. The weather is very pleasant now, being cool," &c.

THERMOMETRICAL TABLES.—SYRIA.

	Average.			At Noon.		
	Morning.	Noon.	Evening.	Highest.	Lowest.	
1842						
Sept.	80	87	83	95	80	A heavy fall of rain, with thunder, for several hours. Thunder showers very rarely occur so soon.
Oct.	79	84	81	91	76	Some slight sprinkling of rain from a passing thunder-cloud on the 10th and 22d.
Nov.	65	71	64	77	64	Eleven days were more or less rainy. Snow on the heights of Lebanon on the 24th.
Dec.	59	64	61	76	57	Ten days rainy. On the 24th, snow fell as low as the village of B'Hamdoon.
1843						
Jan.	54	63	58	70	54	Twelve days rainy. Hail, slightly mingled with rain, on the 9th and the 21st.
Feb.	57	67	58	75	59	Nine days rainy, besides occasional sprinklings.
March	62	68	61	76	57	Seven days rainy. A remarkable comet appeared on the 4th.
April	64	68	65	77	58	Rain fell on nine days this month.
May	67	73	69	80	60	Rain fell on four days.
June	72	78	70	84	72	Five minutes light rain this month.
July	79	88	80	95	80	No rain.
Aug.	81	89	83	96	84	No rain.

At B'Hamdoon, a village on Mount Lebanon, about the level of the sea, the thermometer stood as follows:—

July	72	75	73	77	68	No rain.
Aug.	69	71	70	84*	66	* During a Sirocco.
Sept.	69	73	72	83*	62	
Oct.	62	70	69	82*	53	

In all the above instances the thermometer stood in the shade. Rain fell in Beyrout on 62 days in the year. On 12 days of the 62, however, there was only a slight sprinkling, but on the remaining 50 days there was heavy rain.

(Signed) THOMAS KERNS, M.D.

"Thus, then, it is manifest, that the prejudices of the natives, from which so much was at first apprehended, are entirely overcome; and the Turks, so far from offering any opposition to our agent, are anxious to place themselves under his care: they bring their dearest relatives, and even solicit his aid in behalf of the ladies of their harems. Dr. Kerns frequently has occasion to allude to this; and in one of his last letters, he writes —"It will be pleasing to the Committee to learn, that *universally* a feeling of gratitude prevails among those who have been the objects of our care; and the deference paid to British medical science is highly gratifying to myself; it is a matter which calls forth my earnest acknowledgments to a kind providence, that I have been thus far enabled to carry out the benevolent institutions of the Society, without being materially thwarted by native prejudice or arrogance. Notwithstanding the seclusion which custom has imposed upon the females of these countries, they constitute half the number of applicants at the dispensary, which, in itself, shews how much the people value the benefits conferred upon them. My patients consist of Jews, Moslems, Druses, and those of every christian sect in Syria; and not less varied in their class or rank in society,—from the Albanian soldier and Arab camel-driver, to the pascha on his divan. I frequently have the officials of the Turkish government, and also some of the most respectable emirs and scheikhs of Mount Lebanon, with the members of their families: and though such cases may not strictly come within the province of a charitable institution, still, as they gratefully accept gratuitous aid, I never hesitate to grant it (trusting to their generosity to contribute to the funds, or at least to facilitate, by their influence, the objects which we have in view), being persuaded that in so doing, I shall meet the wishes of the Committee, and impress the Syrians with the true and disinterested nature of that christian benevolence which animates their friends in England."

I am afraid, sir, I have already trespassed too much upon your liberality; I will only, therefore, add, in conclusion, that we have not given up the idea of opening a hospital at Beyrout, or of sending agents to the other principal towns, as contemplated in 1842, when the institution was first established. There still remains a great deal to be done, but I am sorry say that the state of our finances does not keep pace with our desire to do good; and the utmost we can hope to accomplish at present for these afflicted and enduring people is a continuance of those benefits, which, through the exertions of Dr. Kerns, we have hitherto been permitted to confer.

Once more thanking you on the part of the association,

I have the honour to remain, sir,
Your obedient servant,
W. Holt Yates, M.D. &c.

53, Woburn Place, Russell Square,
January 27, 1843.

THE OPINION OF DR. WILLIAM HUNTER ON THE REMOVAL OF OVARIAN TUMORS.

To the Editor of the Medical Gazette.

Sir,

The following quotation, containing the opinions of Dr. William Hunter respecting the removal of ovarian tumors, appears to me to bear upon the discussions of the present day, on the same subject. I am not aware that the passage has been quoted by any of the recent writers on the subject; and as Dr. Hunter was, to use the words of the late Dr. Gooch, "a man of great talents and knowledge, singularly adapted for natural investigations, and remarkable for clearness of intellect and correctness of judgment," some of your readers may be glad to know his opinions on the subject.

"The encysted dropsy of the ovarium is a case which has a less chance still of being carried off by scarifications in the legs, when complicated with an anasarca. Purging, &c. does still less towards evacuating the waters in this case, whether fluid or gelatinous, than in the common ascites. I have had occasion to see a great number of encysted dropsies, many of them treated by physicians of the first rank, and yet have never seen one cured; nor have I ever known one case of that kind, where the cyst has been sensibly diminished in bulk by any other means than by the trocar. If I may form a judgment by what I have seen, both in the living and in the dead body, I should believe that the dropsy of the ovarium is an incurable disease; and that a patient will have the best chance of living longest under it, who does the least to get rid of it. The trocar is almost the only palliative. It has been proposed, indeed, by modern surgeons, deservedly of the first reputation, to attempt a radical cure by incision

and suppuration, and by the excision of the cyst. I am of opinion that excision can hardly be attempted; and that incision and suppuration will be found by experience to be an operation that cannot be recommended, but under very particular circumstances." That the reader may see what this opinion is founded upon, I will give a concise account of the nature of the dropsy of the ovarium, as it has appeared to me in a number of cases, both in the living and dead body. It is generally of considerable size, as big as a pint bottle for example, before it is discovered; for the patient generally has neither bad health nor pain to put her upon an early inquiry, and while it is small, it is perceptible only in particular situations. At first it is commonly situated towards one side of the lower part of the belly, and is moveable under the hand: then it becomes gradually more fixed, more extended both forwards and upwards in the belly, and more painful and oppressive to the patient, &c. When the cyst is single, and extended over the whole abdomen, it cannot be distinguished by the feel from a common ascites; till then it can hardly be said to resemble the ascites. When there are a number of cysts, we are generally sensible of the inequalities and the swelling, from first to last. In the dead body, upon examination we find they take their origin from the ovarium, or adjacent parts at the ligamentum uteri latum. But when small, and when so large as to contain several quarts, they are sometimes detached or loose all around, except just at their origin; but more commonly they are found to have contracted partial and irregular adhesions to the neighbouring parts, seldom if ever to the floating loose turns of the bowels. When they are come near to their utmost extension, they sometimes adhere uniformly and universally to the parietes of the abdomen; but more generally, even in this case, the adhesion is partial and irregular. When there is only one coat, it generally, if not always, contains a thin water; where there are many, some of them more commonly contain a ropy fluid, in consistence like gall or thin honey; and others a gelatinous substance. The thin water is usually clear, the ropy fluid of a dark brown colour, and the jelly sometimes less clear and transparent than the white of an egg: sometimes it is mixed with opaque white parts; sometimes it is of an amber colour; and at other times dark and brown. All this variety has been found in the same person. I can hardly say that I have ever found any part of a dropsical ovarium in a truly scirrhous state. What at first view might seem such, proved, upon cutting, to be a compact group of small bags; or a spongy substance filled with jelly. Generally, before the patient dies of such a dropsy, some degree both of leucophlegmasia and of ascites is brought on; so that when such bodies are opened some water is found loose in the cavity of the belly; and sometimes the cyst is found to have burst, and to have discharged its contents into that cavity. Now if the disease be nearly what I have stated, must not the wound made in the belly, for the excision of the cyst or cysts, always be large enough to admit the surgeon's whole hand? Must it not be often a good deal larger; as when the tumor is large, and composed of a number of bags filled with jelly? Would not such a wound be attended with a good deal of danger from itself? Would it not be very difficult to cut the peduncle or root of the tumor, with one hand only introduced? Would it not be impossible to do this, where the adhesions proved to be considerable? Would there not be great danger of wounding the intestines? If any considerable branch of the spermatic artery should be opened, what could the surgeon do to stop the bleeding? If it be proposed, indeed, to make such a wound in the belly as will admit only two fingers or so, and then to tap the bag, and draw it out, so as to bring its root or peduncle close to the wound of the belly, that the surgeon may cut it without introducing his hand, surely, in a case otherwise so desperate, it might be admissible to do it, could we beforehand know that the circumstances would admit of such treatment. With regard to incisions and suppuration, all that is proposed to be got by this painful operation is the change of the dropsy into an incurable fistula of the belly. For this the patient must not only undergo much pain, but likewise be exposed to great danger; particularly

where the cyst happens not to adhere to the muscles at the part the incision is made, or where there are a number of cysts. In the first case, the wound will be a large one, communicating with the cavity of the abdomen; and both the external air, and the contents of the incised cyst, will be admitted into that cavity, so that we may expect very considerable inflammation. In the second case, where there is a number of cysts, the inflammation and suppuration will either be too slight to discharge all of them, or too considerable to be supported with life."—(Medical Observations and Inquiries, Vol. II. p. 41, &c.) I have quoted the whole passage. The doctor appears to have had a very unfavourable opinion of the operation for the excision of ovarian cysts, and it seems probable that this great man never contemplated the possibility of patients being laid open from the ensiform cartilage to the symphysis pubis, to make room for the removal of ovarian tumors.

I am, sir,
Your obedient servant,
SAMUEL CROMPTON.

71, Grosvenor Street, Manchester,
January 22, 1844.

CONTRIBUTIONS TO PATHOLOGY.

BY JOHN PERCY, M.D. Edin.
Physician to Queen's Hospital, and Professor of Organic Chemistry, Queen's College, Birmingham.

(For the London Medical Gazette.)

ADMITTED in-patient of the Queen's Hospital, Dec. 30, 1842, Martha Dickins, æt. 23; single; sempstress. Reports that three months ago, during the presence of the catamenia, she "got wet in her feet," and became affected with pain on the right side of the chest. Leeches and blisters were applied with relief. I also ascertained that for many months previously she had suffered considerable distress of mind. She has never had acute rheumatism. Before admission, she was engaged at the house of my respected colleague, Mr. Lansgton Parker, who informed me that she had had anasarca and palpitation, for which he prescribed a mixture containing digitalis and nitrate of potass.

Present symptoms.—Cough, with expectoration. Faintness, and occasional dyspnœa. Pulse extremely small and feeble, and can scarcely be counted; 88. She is harassed with frightful dreams. Skin cool. Tongue furred and moist. Perspires much at night. Appetite capricious. Catamenia now present, not having appeared for two months previously. Much complaint of pain referred to lower and anterior part of chest, most severe at a spot on a line with the left nipple, and at the edge of the sternum, aggravated by breathing and coughing.

Both sounds of the heart distinctly audible. Bruit accompanies the first sound, and is loudest two and a half inches below the superior edge of the sternum (the patient being in the horizontal posture). Bruit is heard in the course of the carotids, but is not heard at the apex. Dulness in præcordial region extending over a larger space than natural. Turgescence of the external jugulars, with distinct pulsation. Respiratory murmur generally distinct over the anterior part of the chest.

From the preceding data, I concluded that obstruction certainly existed at the origin of the aorta, and that probably it was dependent upon disease of the semilunar valves. The disease steadily progressed. The pulse at the wrist continued imperceptible for many weeks before her death. Faintness was induced by the slightest exertion. The extremities were constantly cold. She complained frequently of pain referred to the præcordial region and other parts of the chest; of pain also extending down the left arm, and across the forehead. I introduce only a few extracts from my journal.

Jan. 28th.—Last evening, half an hour after tea, she vomited a small quantity of dark-coloured blood.

Feb. 4th.—Shooting pain down both arms. Lightness of head. Nausea after eating. Vomited last evening.

8th.—Since the 6th has expectorated viscid mucus containing pus, and much streaked with blood. Passed blood by stool last night. Shooting pain in lower and anterior part of chest, excited by coughing. Vertigo. Dreams much. Lividity of the lips. Pallor of the countenance, with the exception of the cheeks, which present a flush of pale livid red. Pain in the calves of the legs. Pulse imperceptible. Dulness on percussion over a considerable space on anterior part of the chest. Heart's action very rapid. Turgescence and distinct pulsation of the external jugulars. No œdema in any part.

11th.—Passes blood by stool. Urine scanty. Œdema of feet. Sputum frothy, and streaked with blood.

16th.—(Report of Mr. Fulford, House-Surgeon). The respiratory murmur is loud and harsh in the upper part of both lungs;

inferiorly, there is sub-crepitant râle, most audible on the right side. The first sound of the heart is converted into a rough sawing kind of murmur, loudest at the junction of the third rib with the sternum; the second sound is continuous with the first. The bruit is not so distinct near the apex of the heart. Bruit is heard in the course of both carotids. There is venous turgescence with pulsation. The face is livid and bloated; vision is dim; the lower extremities are œdematous; and there is constant harassing cough, attended with copious thick muco-purulent expectoration mixed with blood.

17th.—The patient has been much disturbed by cough in the night. At midnight there was considerable epistaxis, which relieved the headache. Other symptoms as before.

Feb. 18th.—Countenance much bloated and dusky. There has been some delirium. Epistaxis recurred during the night, and blood of a red colour was also passed by stool.

22d.—Dark ecchymosed patch below each eye. Œdema of legs, but not of arms. Surface of the body generally, especially posteriorly, mottled with livid spots, in many parts resembling *purpura*. Breath continues excessively fœtid. Passed blood by stool. Sputum still bloody. Dysuria. Abdomen swelled and tympanitic.

25th.—As before. Extensive dulness over lower part of right side of chest posteriorly; some dulness also on lower part of left side. Mucous and sonorous râles. Complains of a constant salt taste in the mouth; says "it is like salt water running out of the mouth."

She died Feb. 28th, 3 A.M.

Autopsy, the same day.

Body generally anasarcous.

Chest.—Effusion in the right pleura, but not in the left. Right lung completely condensed inferiorly; condensation apparently of old standing. Left lung small and spongy, and bound down posteriorly by strong cellular bands. I found no trace of hæmorrhagic hepatization in either lung.

Heart.—Large; weighed 12 ozs. 5 drs. Troy. Pericardium free, and without effusion. The semilunar valves of the aorta, the mitral and tricuspid valves, were all much thickened at the edges, and had a cartilaginous consistence. No distinct deposit of lymph was observed upon any of them, although their edges appeared to be very delicately fringed. The semilunar valves of the pulmonary artery were perfectly natural. The diameters of these valvular openings were accurately ascertained by carefully distending them with a cone of box-wood, and then measuring the cone with callipers on a line corresponding to the edges of the valves.

Aortic semilunar valves, between $\frac{6}{24}$ and $\frac{7}{24}$ inch.

Mitral $\frac{1}{3}$ of an inch.

Length of the opening of the mitral valves, when the edges were approximated, measured from the auricle, $\frac{15}{16}$ inch.

Pulmonary semilunar valves, $\frac{3}{4}$ inch.

Tricuspid, $\frac{19}{16}$ inch.

Left ventricle dilated; walls an inch in thickness.

Right auricle much distended, and contained a loose clot, with small clots of fibrin entangled amongst the muscular fibres. Right ventricle dilated, but the walls were not increased in thickness.

Aorta a little dilated above the semilunar valves, without asperities on its internal surface. Abdominal aorta contracted; diameter, three inches above the bifurcation, was $\frac{5}{16}$ inch.

The apex of the heart pointed between the sixth and seventh ribs.

Abdomen.—Stomach and intestines contracted, healthy in appearance. No indication of disease in the other organs.

Examination of the Urine.

Feb. 1st.—Dark brown; sp. gr. 1027°; copious pale brick-red precipitate of urate of ammonia; filters clear; turbid by boiling; turbidity not removed by nitric acid, which occasions immediate separation of flocculi.

15th.—Sp. gr. 1025°; similar to the preceding; beautiful pale reddish-brown deposit of urate of ammonia left on the filter.

Analysis of 1000 *grains.*

Water	944·8
Urea	12·3
Albumen	1·6
Fixed salts	9·6
Organic matter, including uric acid and a very large proportion of colouring matter	31·7
	1000·0

Chlorine was entirely absent from the fixed saline ingredients of this specimen of urine; nor did I satisfactorily detect soda, although potass was abundant. I repeated the examination with the greatest care, and with the same results. I operated upon the incinerated residuum of 250 grains of urine. Not the slightest trace of precipitation was produced by the addition of nitrate of silver and nitric acid. I obtained, by the addition of carbazotic acid, crystals of carbazotate of potass of the characteristic form; the next morning they were nearly an inch in length. There was immediate precipitation on the addition of chloride of platinum.

Dr. Prout remarks that, "in some instances, indeed in all instances in which I formerly made the experiment, I found the quantity of muriatic acid exceedingly diminished, and sometimes even almost en-

tirely wanting, in the urine of persons in the last stage of chronic diseases, and at the point of death." (On the Stomach, &c.) Becquerel (Sémeiotique des Urines, p. 85) asserts that this statement of Dr. Prout is entirely without foundation. I am not prepared at present to speak decidedly on this point; I can, however, affirm that, in the case before us, no chlorine existed in combination with a fixed base in this urine. I regret that I did not search for the presence of chlorine in the urine itself, as well as in the residuum of the incineration. The specimen which I subjected to analysis was passed Feb. 15th, and the patient lived until the 28th. On the 25th we find, by reference to the register, that she complained much of a salt taste in her mouth, as though "salt-water was running from it." The coincidence between the absence of chloride of sodium from the urine, and its presence in increased proportion in the saliva, would be remarkable.

Obs.—The symptoms which existed in this case are clearly explained by the post-mortem examination. The extremely constricted condition of the opening through the semilunar valves of the aorta was, probably, the principal cause of the bruit, which, it will be remembered, was loudest in the situation of these valves, was heard in the course of the carotids, and was either absent or not distinctly heard at the apex. The connection between the symptoms recorded in the preceding history, and the diseased condition of the valves, is so obvious, as not to require, in a communication of this kind, further comment. One point is deserving of especial notice, namely, that the disease could not, by careful inquiry of the patient, be traced to rheumatic endocarditis. Her illness evidently commenced with an attack of pneumonia of the lower part of the right lung.

In respect to treatment, palliative measures could alone be resorted to. The almost imperceptible pulse at the wrist, the occurrence of faintness on the slightest exertion, and the languor, of which the patient greatly complained, suggested the exhibition of diffusible stimuli and light tonics accordingly, mixtures, containing ammonia, æther, camphor, calumba, with morphia or tincture of conium, were prescribed with temporary relief. The bowels were regulated by the common colocynth, or compound rhubarb pill. The patient complaining much at one period of her illness, of pain referred to the lower and anterior part of the chest, the application of a blister to the sternum was attended with benefit.

[To be continued.]

CONTRIBUTIONS

TO

ANATOMY AND PHYSIOLOGY

By Robert Knox, M.D. F.R.S.E.

Lecturer on Anatomy and Physiology, and Corresponding Member of the French Academy of Medicine.

[Continued from p. 371.]

On the Corpus Luteum.

It has been already stated by me, in some prefatorial remarks appended to Part II., that my brother, Mr. F.J. Knox, who assisted me in most of my inquiries and researches, objected to the analysis I had made of the "Lecture on Generation," by Sir E. Home. I requested him, therefore, to draw up his own views on the matter. These will be found in the following section, which exclusively belongs to him. It was written nearly four years ago, and I now publish it without any alteration or amendment.

I shall only here further observe, that since reading it I have again looked into the "printed catalogue of the Hunterian museum," and regret to say that I see no reason for altering the opinion I formerly entertained regarding it; viz. that it gives no clear idea of Mr. Hunter's labours, nor of his preparations; that it is, in fact, a catalogue of a museum not strictly "Hunter's," but a mixed "collection" from many sources; and that the language employed is calculated generally to misrepresent, unintentionally no doubt, many of Hunter's views. With respect to the preparations illustrative of the history of the corpus luteum, the truth seems to be that the histories of most of them have been lost, or were destroyed by Sir E. Home; and they have been re-described by others entertaining views quite opposed to those of Mr. Hunter. The reader will be pleased to remember what I have already stated on this point, namely, that a few weeks before the appearance of the printed catalogue I examined this very division of the museum, with the MS. catalogue of Mr. Hunter in my hand, kindly sent me by the Con-

servator, and of sixteen preparations evidently bearing on the history of the corpus luteum, I did not find one whose number or label corresponded with the catalogue; or, in other words, the number of the preparation being referred to in the catalogue gave a description altogether at variance, and sometimes ludicrously so, with the preparation itself. Under such circumstances, it is not to be wondered at that the printed catalogue of "the Museum of the Royal College of Surgeons in London" is not what the public probably expected it to be, a catalogue of Mr. Hunter's museum, illustrative of his views and labours, solely. Such a work is still to make.

A single word with reference to "the Lecture" by Sir E. Home, which has given rise to so much dispute and discussion. Like all his other lectures, the substance or pith was mainly copied simply from Mr. Hunter's MSS.; indeed, he says so himself; but his object being fraud and concealment, Sir E. has mingled up many of his own notions, whether original or borrowed does not matter, with those of Mr. Hunter. Hence has arisen the inextricable confusion so remarkable throughout all these lectures, a confusion which long puzzled myself, and which I find greatly embarrasses foreign scientific men: such is the mixture of those observations of the highest and most transcendental merit which of course he drew from Mr. Hunter's writings, from his preparations, and from Mr. Clift's recollections, with those hasty, and but too often crude conjectures more particularly his own.

To conclude:—On re-examining Sir E. Home's "Lecture," I find the following passage, p. 295, immediately following the announcement of what Sir E. considers and calls *his* new doctrine, though one of the oldest in physiology, namely, that "the corpus luteum is a glandular structure forming the ovum, whether the ovum be impregnated or not."

"This new (!) fact led me to examine the ovaria in the preparations in this collection (meaning, of course, Mr. Hunter's museum), both in women full grown and just arrived at puberty, in which the hymen was entire; in many such ovaria the corpus was distinctly seen."

Now between the servant maid's case, and this *new fact*, as Sir Everard is pleased to call one of the oldest of physiological theories, there absolutely is not the slightest traceable connexion; but it suited his purpose to say so, and it enabled him to go back to the museum, as many do yet, to pretend to look for confirmation of the fact, as he terms it, in preparations which they would fain make believe were put into the museum by Mr. Hunter merely by accident; in fact, that he placed them there, as modern collectors do, without any reference whatever to what they may illustrate, but merely as so many preparations. But virgin, or presumed virgin ovaria, presenting the appearances of corpora lutea, could have been placed by Mr. Hunter in his museum only with one view, namely, of proving the corpus luteum to be a structure independent of impregnation: thus this *new* fact of Sir Everard's was at least as old as Mr. Hunter's preparations, but was, in fact, a hundred years older than Mr. Hunter himself.

The plates referred to by Sir Everard as being drawn from preparations of virgin ovaria, shewing a corpus luteum in "the collection," are 108, 109, and 110. Now, on looking at these plates, I find that plate 108 represents a case of ovarian pregnancy, and therefore has no connexion whatever with the subject in question: this is in Sir Everard's usual style. Plate 109 gives six views of ovaria; the 1st and 2d are from a woman who carried a child at full birth; the 3d and 4th are from the same person; and the 5th and 6th represent the ovarium of a woman who died at the age of 70, to show how little of the appearance of corpora lutea remains. Sir E. then refers to these plates as representing the ovaria of adult women in whom the hymen was entire, and who had corpora lutea in them! virgin ovaria! of whom one had given birth to a child! Yet such was the state of science in Britain at the time these papers were read in London to the Royal Society, and before the united College of Surgeons, that no one was able, or had courage enough, to face the clique of the Society, and to denounce the author and his abettors for what they really were—impostors!

But to proceed. It is scarcely necessary to say that plate 110, the one next

referred to by Sir Everard, has no connexion whatever with the text; it does not represent virgin ovaria, but human ovaria five days and six weeks after impregnation.

The next passage in the text which refers to the matter now discussed is as follows: "That corpora lutea are formed in a state of virginity, is proved both in the human species and the hog tribes, as will be ascertained by the following examinations."—Plates 108, 109, 113, 114, p. 304.

I have already shown that plates 108 and 109 have no connexion whatever with the matter treated of in the text; plates 113, 114, and 115, refer exclusively to the ovaria of the pig and of the cow; but the description opposite plate 113 distinctly says that the ovarium here represented is the "external and internal view of an *impregnated* (not a virgin) ovarium: so that of all the boasted proofs of the *new fact*, we are at last reduced to the contents of plates 114 and 115, to which he has not referred: these plates refer exclusively to the pig and the cow: they purport to be drawings of the ovaria in a virgin state at six months; perfect corpora lutea may be seen in them at all stages. The preparations from which these figures are taken must at one time have existed in the Hunterian museum; but if so, why are they not described in the printed "Catalogue of the College?" They were Mr. Hunter's, evidently, and they mark in a peculiar and forcible manner the theory he held in respect to the formation and functions of the corpus luteum.

Lastly, at page 304, the case of a young woman is referred to, 20 years of age, with a perfect hymen, in whom one of the ovaria was found to contain a corpus luteum and an ovum. Plate 110 is referred to; of course the drawing has no connexion whatever with the text.

The ovaria in the adult but virgin state are egg-shaped bodies, compressed from before backwards, of a pale red colour, wrinkled and rough at their surface, which often presents a kind of cicatrice. They are placed in the substance of the broad ligament of the uterus, attached internally (towards the median plane) to the uterus by a small filamentous cord about 1½ inches long, entirely solid, and called the ligament of the ovary *(ligamentum ovarii)*, and externally to one of the fimbriæ of the uterine tube *(tubæ Fallopianæ, morsus diaboli)*.

Dissection proves them to be composed of a soft and spongy parenchyma *(stroma*—Baer), which, when torn, seems composed of cellular and vascular lobules of a greyish colour, gorged with a great quantity of fluid. This parenchyma *(stroma)* is enveloped by a dense cellulo-filamentous membrane *(tunica albuginea)*, from the inner surface of which there pass a great number of prolongations into the stroma. The arteries (named spermatic) which supply the ovaries with arterial blood, arise from the anterior and lateral parts of the aorta, a short way below the renal arteries; they anastomose with the uterine arteries. The veins commence in the ovaries, and, after a very complex course, terminate; the right in the vena cava, the left in the corresponding renal vein. The nerves (named spermatic) consist of two plexuses, derived chiefly from the renal plexus. They follow the course of the spermatic arteries; the filaments are extremely fine, and have not been traced into the texture of the ovaria. These textures reach and leave the organ at a transverse line, which may be called *fixed*, placed inferiorly and posteriorly between, in fact, the layers of the peritoneum, the ovaria rising, as it were, angularly, and looking upwards from off the anterior lamina of the broad ligaments. Lastly, the organ receives an almost complete envelope from the peritoneum. The broad ligaments of the uterus are known to be two folds of the peritoneum reflected off the anterior and posterior surfaces of the uterus. The vessels, &c. passing towards and from the uterus and ovaria are placed between these laminæ, and the ovaria also lie between them; these bodies project anteriorly by the anterior peritoneal fold, having, as it were, been pushed before the ovary; so that the organ may be said more properly to derive its peritoneal tunic from the anterior lamina of the broad ligaments: this seems rather an important fact, as it influences the position of the ovaria, more especially when the whole genital organs are spread out on a flat surface.

Ovarian vesicle.—In the midst of the stroma, or parenchyma of the ovaria, are lodged small vesicles, to the num-

ber of from 15 to 20, transparent, of the size of a millet-seed. They are composed of a very delicate pellicle, or covering, containing a viscid fluid of a reddish or yellowish colour, and around these vesicles the vascular ramifications are more numerous and more minute.

We shall here record the dissection of the human virgin uterus and ovaria, as a guide to future observers, and a standard to sundry weights and measurements, which we shall give, as connected with impregnation.

The virgin female uterus perfectly healthy. The broad ligaments were divided with a pair of scissors all around the uterus, and removed, including the fallopian tubes. The vagina cut across close to the os uteri:

Weight	470 grs.
	Inches lines.
Length mesially, os uteri to fundus	2 3
Greatest transverse breadth, near fundus	1 6
Antero-posterior breadth	0 9

This uterus had been many years in alcohol, having been put up as a specimen of the unimpregnated healthy female uterus, being that of a young person, æt. 18, and who had most assuredly never given birth to a child.

Right ovarium—weight	78 grs.
	Inch lines.
Length of the fixed margin	1 3
Greatest depth	0 8
Greatest breadth	0 4

Section along the fixed (straight) margin, that is between the two laminæ of the peritoneal tunic, where the vessels enter the organ. The external surface of this ovarium is marked with numerous pretty deep waving fissures, the effects, as I had always supposed, of being put amongst alcohol, but which I find anatomists call cicatrices, a term to which they must have applied no positive meaning, as they use the same word, without any qualification whatever, to an appearance presented by the section of some impregnated fruitful ovarian vesicles (Graafian vesicles after fruitful impregnation, corpora lutea, &c. &c.)

The section displayed four cysts, varying from one to three lines in diameter, and composed of a distinct and apparently loosely connected capsule, in the interior of which a shrivelled-up body lies; these appear to me the remains of ovarian vesicles.

Left ovarium—weight	80 grs.
	Inch lines.
Length of fixed margin	1 6
Greatest depth (about middle)	0 9
Greatest breadth	0 4

Section along the free convex margin, carried so deep, and in such a direction, as nearly to divide the ovarium into two equal halves. This ovarium weighed two grains more than the right, and felt fuller and firmer. The section was made along the free convex margin (by much the best), and displayed eight distinct cysts, which the knife had nearly bisected, with others of a smaller size, in which the knife had removed only a small part of the capsule. The largest of these cysts may be about two lines diameter, and they are all composed first of a capsule of about a quarter of a line thick, loosely connected with the stroma of the ovarium, and in the interior, lying shrivelled up, a small body perfectly loose. The capsule I consider the external membrane of the unimpregnated ovarian vesicle; the loose body I consider the membrana granulosa, and its fluid now absorbed, or the granular membrane itself contracted. What are these cysts, then? My opinion is, that they are ovarian vesicles unimpregnated, in a state of active preparation at the time of death.

Uterus of a married woman who had had two children, besides miscarriages. This person put a period to her existence by cutting her throat. Her husband, who had been a letter-carrier, but unable for the work, had died the morning before from sheer starvation. The texture of the uterus, when cut into, seemed more than usually vascular. (Same dissection as in the former case).

Weight	8 oz.
	Inches lines.
Length from os uteri to fundus	2 10
Greatest breadth near fundus	2 1
Antero-posterior diameter, or thickness	1 6
Right ovarium. Weight	65 grs.
	Inch lines.
Length	1 5

Form—an elongated compressed oval, externally presenting a mottled appearance, with three or four irregularly-shaped grooves, or fissures *(hacks)*. A section in the long axis displays, amongst other appearances, two cysts bisected; the one nearest the proximate pole of the ovary has a thick, distinct, whitish capsule, containing nothing;

the other, below, or outside of it, appears to me more a cavity in the ovary. I observe two vesicles (Graafian) about the size of peas, containing a fluid.

Left ovarium (weight 74 grs.) presents externally a diseased mottled appearance, with numerous hacks towards its distal pole. A section displays in the upper (proximal) end of the ovary two white tubercular-looking masses, a very distinct melanotic mass, and, as it seems to me, more numerous blood-vessels than usual. The fimbriated extremity is evidently altered by the formation of adhesions, but the tube is quite pervious. It appears to me that the fimbriated extremity is calculated and formed to embrace entirely the ovarium, and I strongly suspect that the seminal fluid reaches the organ. In both these ovaria I observe distinct vesicles, similar to what may be observed in the sheep, but smaller in size, not exceeding two lines in diameter; they are quite near the surface, being covered only by the semi-transparent peritoneum: these did not seem to be very vascular.

The examination and comparison which I have drawn between these two cases seems to me interesting. In neither case was there the slightest approach to uterine action, particularly ovarian. The increase of weight in the uterus of the female who has had children seems enormous, being more than eight times that of the virgin, whilst the virgin ovaria are both considerably heavier (nearly 10 grains,) than those of the married female.

We cannot call the attention of our readers in too strong language, to the fact, that in this part of our "contributions to the history of the corpus luteum," we confine our views and observations entirely to human structure.

That vesicles exist in the virgin state, dissection proves beyond a doubt, and although there may be considerable discrepancies or differences in the anatomical description of these vesicles by various authors, yet, upon the whole, that given by De Graaf may be taken, and which we have already given, it being merely copied by all anatomists.

Does the vesicle undergo any changes in the virgin state? This will be found by no means answered; and yet it is unquestionably the most important question which the whole subject of pregnancy, and all its phenomena, present. Volumes have been written by numerous authors on the subject of generation, and this amongst other questions has become involved in the greatest possible confusion. The term false corpora lutea (in contradistinction to true corpora lutea,) appears in every second line of some late authors; and cysts, hydatids, melanotic tumors, effusions of blood, &c. &c. &c. are spoken of as being present in nearly every case! It is admitted at the same time that these appearances often present a striking resemblance to the true corpus luteum; by which expression is now very generally meant an appearance in the ovarium of a woman who either is at the time impregnated, or has very recently had a child; a change, in fact, which is effected on the ovarian vesicle by impregnation, or co-exists with it, or immediately precedes it.

The term corpus luteum is rather an unfortunate one; but it will not now be easily changed. It appears originally to have been given by the early observers to a yellowish body found in the ovaria of the lower animals, and when so applied it is very appropriate; but when extended to the human subject it leads to great confusion. Part 1st of these our contributions will be found nearly composed of the history of one case, and the anatomical description of the so-named corpus luteum. The body in the human ovarium known under the name of a corpus luteum is of an irregularly spherical or oval form, and of a very complex structure, consisting of many parts and textures, tunics, and cavities, and these ever undergoing changes according to the period of impregnation. The distinctive characters proposed by some authors, in order to determine between what they call true and false corpora lutea, are extremely finely spun, and in fact, in the present state of our knowledge, there are, perhaps, no two persons living, who will agree upon any case which may be brought forward. It is all very easy in a case where a fœtus is found in utero; but shew a man, however high his standing may be, the ovary alone, and a thousand to one he will have nothing but mere surmises and guesses to offer.

The recorded opinions of authors, of

which we shall immediately quote a few, will illustrate how much Doctors differ on this important point. There are some, we may remark, who think that ovarian inflammation always follows impregnation, and according to them disease and diseased appearances in the ovary are universal! This is most assuredly not in unison with the ordinary laws of nature, and, we feel convinced, will not in any shape be borne out by a scientific appeal to the structure itself. We think that disease and inflammatory action in the ovaria is, perhaps, the rarest possible appearance, and that the statement is made by those persons merely to get over facts of which they know nothing.

[To be continued.]

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The Medical Student's Guide and Almanac for 1844*: the latest Regulations of all the Licensing Medical Corporations in the United Kingdom, with a Correct List of their Officers; the Metropolitan and Provincial Schools, and Universities and Medical Schools of France, and brief Notice of the German Universities; and a great variety of useful information.* Renshaw.

The Medical Almanac: a Calendar of Medical Information for the Year 1844, *being Bissextile or Leap Year.* Churchill.

EITHER of these brochures will be found very useful by the medical student or practitioner. Renshaw's has the advantage of containing most information; Churchill's the recommendation of being cheaper. (The price of the former is 2s. 6d.; that of the latter only a shilling.)

The latter contains every thing in the world connected with physic and surgery which this country can boast; the former every thing to be found both at home and abroad, giving us pretty full information regarding the universities and medical schools of France, and all that is necessary to be known touching those of Germany.

We advise our medical friends to have one or other of these almanacs on their library table.

MEDICAL GAZETTE.

Friday, February 2, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

GENERAL PRACTICE.

To clothe the naked is pretty generally recognized as a social duty; but there are two modes of performing it which are adopted by those who give themselves the trouble of relieving this form of human suffering. The one is that detailed in the well-known legend of St. Martin. The saint, meeting a naked beggar, drew his sword, and divided his own mantle into two equal portions, one of which he gave to the sufferer. That is one way. Hume the historian quotes from Fitz Stephens an anecdote of Henry II., who, "when riding with his Chancellor and then favourite Thomas-à-Becket, met a beggar shivering with cold. 'Would it not be very praiseworthy,' said the King, 'to give that poor man a warm coat in this severe season?' 'It would, surely,' replied the Chancellor, 'and you do well, sir, in thinking of such good actions.' 'Then he shall have one presently,' cried the King: and seizing the skirt of the Chancellor's coat, which was scarlet and lined with ermine, pulled at it till the Chancellor, to avoid a tumble, let go his coat, which the King bestowed on the beggar, who being ignorant of the quality of the persons, was not a little surprised at the present."

This last is unquestionably the more royal method of the two—it is also the more popular; and the one to which men are very apt to resort in redressing grievances. In our meditations on the inconveniences which beset the general practitioner at this moment, the royal method of relief has been suggested to us, and has found some favour in our eyes. The person

at whose cost we are most tempted to be benevolent is the retail chemist and druggist; and the same kind of motive prompts us as tempted the monarch to exercise his jocular benevolence at the expense of his Chancellor, namely, that he seems so well able to afford it. The smart shops and the splendid bottles of the druggist are as suggestive as the scarlet of the well-mounted churchman.

The College of Physicians has really imitated, in some degree, the good St. Martin, in whose parish they are located. If they have not equally divided the mantle of their honours with all who desired to share it, they have at least thrown the skirts of it over many who were formerly naked, and though some begged somewhat sturdily to be sure, yet merit will be claimed and must be granted for the concessions made.

It is quite notorious that the profits of the general practitioner are gradually falling into the hands of the chemist and druggist. We pointed out in a late article some of the principal circumstances which had produced this effect*, and we should now be glad to see things a little set to rights.

And first a few words about the retail druggist, at whose coat we are going to have a pull. The character of the druggists, as a body, we believe to be excellent. We well know that half a century ago, or less, there were but a few houses where genuine drugs could be procured, at any price. The names of W. Allen, Savory, Fisher, Godfrey, and a few others, were a guarantee that at their houses the right thing would be given for the right price, but in all shops except the well known few, the obtaining a genuine article in a good state could not be relied on, and even at some of these, the more expensive drugs, such as Peruvian bark, were kept of various qualities and at different prices. Systematic adulteration, we are credibly informed, was habitually resorted to, and the confining this within certain well-known limits was a mark of respectability; to overpass these limits only was disgraceful. "There is lime in this sack, too," says Falstaff, wounded in his tenderest point. "Things that are mouldy lack use," was the witty knight's excuse for enlisting the lean tailor instead of sounder men; and some drugs that ought to be thrown away are kept, no doubt. There is much Devil's dust in all trades, that Mr. Ferrand has not yet beaten out, and never will. But, making the due allowance for human frailty, we believe that the drugs at most retail shops are genuine.

How, then, is the abundant and ever-increasing display of plate glass, mahogany, and coloured lights, paid for? Simply by profits, half at least of which ought to accrue to the general practitioner. The charges for drugs, when compounded, are exorbitant. They are charged at a price which was once supposed to be that of intelligence and learning in prescribing, not merely of honesty in supplying and care in compounding the drugs—not of so much dog latin as will translate a prescription, but of so much skill and responsibility as will contrive one. Hic labor hoc opus est.

If the evil stopped here, if there were merely a rivalry between the attractive shop of the druggist, and the somewhat more dignified seclusion of the qualified apothecary, the case would be comparatively simple – there would be a serious pecuniary loss to the latter, it is true, but that would be nearly all. Even the iniquities of unlicensed counter practice might then be left to the watchfulness of professional jealousy, acting through the coroner or the Common Pleas, as the case might be.

But the evil is far more complicated, and involves the whole character of a respectable branch of the profession,

* See MED. GAZ. p. 250, et seq. of the present volume.

and that the largest. Well-educated men are tempted to rival the retail druggist, and to court both custom and practice by all the arts of display which the latter finds so successful.

The public, especially the lower classes, see no difference—hardly a patient comes to us without having tried what a "chemist" could do for him; and the vexatious part of the business is, that when we gently chide him for not going at once to a qualified practitioner, the chance is that he shows us a bottle or a pill-box with the name of a licensed man emblazoned on it—an M.R.C.S. or a licensed apothecary.

It is quite true a diploma or diplomas may have been hung up in the shop, but the chances are, that, if noticed at all, they were taken by the customer patient for a specimen of marking ink, or the advertisement of some patent medicine, with the seals and signatures of respectable witnesses to its efficacy. We *have* made such a mistake, and then been shocked at seeing the arms of the Royal Coll ge, the rhinoceros of the Worshipful Society, or their no less respected figure of Apollo astride of the Python; so apt are we to judge of a man or of a diploma by the company we find them in.

We formerly shewed that the general practitioner, the apothecary of former days, laid the foundation of druggistry, now so flourishing, by his own mode of charging for medicines. This mode of payment is now felt to be absurd and inconvenient; but if it can be proved to have entailed positive loss, it will be abandoned by all. It has been abandoned by many from a mere sense of its unfitness and inexpediency, and the false position in which it places them.

But it is hard that high-minded and conscientious men should lose the reasonable profits of the art they have studied faithfully, and it is grievous that others should drag down with them the whole body to which they belong by a ruinous competition with the retail druggist.

It is well known that a bill is to be brought forward this session by Sir J. Graham for the better regulation of the profession, but it is to the acts of individuals, not to Acts of Parliament, that the profession must trust for reform. The Apothecaries' Act of 1815 gave the Company much power; but what good has it done them? The power thus given was two fold: that of prohibiting the practice of pharmacy without their license, and that of exacting their own qualifications for obtaining such license. The first they used not against their real rivals, the retail druggists, who prescribed, and who thereby became the enemies of the state, and proper subjects for coercion, but against their apparent rivals, the surgeons. The second power committed to them, that of fixing their own standard of qualification for license, they have used well indeed for the public, and laudably for their own reputation; but while they have raised the standard of qualification, the low practice of remuneration for drugs is continued; their licentiates are like flying fish, they soar for a time in the higher regions of science, but are fain to return for nourishment and support to the lower element which they have quitted. Like this unhappy fish, too, their enemies are both above and below them.

Now if, like Henry II., we were disposed for a benevolent frolic in the capital, we would incontinently do something of this sort:—We should say to the Worshipful Society, give up your Hall at Blackfriars, with all its stock and fixtures at a valuation, to the Pharmaceutical Society. Let the Pharmaceutical Society appoint or license its members to open shops in various places*, let the practitioners of each dis-

* The Pharmaceutical Society professes, we believe, to expel such of its members as pre-

trict open accounts with the different shops, and have their medicines made up at cost price, or a little above it. Let them charge so much a visit, and give the medicines in. The public would be better physicked, for the shops would be all first-rate, and the management liberal. The practitioner would come home, and, first sending or taking his prescription to the shop, he would go quietly to his studies, or his nap, without the anxieties of assistants, porters, and other nuisances.

The public might still humour their own fancies by buying what drugs they liked; but, instead of irresponsible counter practice, there might be a qualified man always on duty for consultation, as well as a first-rate tradesman for the sale of drugs. A really scientific chemical staff would be at hand, with all appliances and means to boot, for the delicate operations of experiment or analysis: in fact, the advantages would be so numerous, that to detail them is impossible. But hold; while we are pulling at the imaginary Chancellor's coat, we are warned to dismount from our own hobby. We may take another airing, however, on a future day.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, January 23d, 1844.

JAMES COPLAND, M.D. F.R.S. IN THE CHAIR.

Abstract of a Case of Phlegmasia Dolens and Synovitis. By THOMAS MAYO, M.D. F.R.S. &c.

THE train of symptoms described in this case commenced about five weeks after delivery, in a healthy female, aged 24, whose lochia, after the delivery, had been nearly suppressed.

The first symptom was lameness, for which she was placed in the chirurgical wards of St. Marylebone Infirmary. Abscess at the knee then was observable; the thigh swelled; and phlebitis of the femoral vein was next noticed. The phlebitis was subdued by antiphlogistic treatment, and the knee freely punctured, with much discharge of pus, and subsidence of pain and fulness. Inflammatory cerebral disease next became manifest; and, on this yielding to depletion, moderately performed, a painful and highly congested state of the conjunctiva ensued. Hemiplegia now occurred, with very defective articulation. Of this class of symptoms, the first set yielded rapidly to remedies; the latter is still, in some degree, present. Strychnia seemed now to benefit the patient.

Throughout this illness, the presence of a hysterical diathesis was highly observable. The author takes occasion to notice, that this fact, coupled with the varying and Protean nature of the symptoms, might have seemed to justify the practice appropriate to hysteria, but for the presence of well marked inflammatory symptoms; and he draws some practical inferences from this consideration, as to the means of preventing such mistakes.

Account of a Horn developed from the Human Skin; with Observations on the Pathology of certain Disorders of the Sebaceous Organs. By ERASMUS WILSON, Esq. Consulting Surgeon to the St. Pancras Infirmary.

Investigating the pathology of the sebaceous organs, the author observed, that several disorders of these organs were due to alteration in the qualities of the sebaceous secretion. This secretion is separated from the blood through the agency of the cells, found upon the internal surface of the glands, and contains among other substances an albuminous fluid and calcareous salts. When the albumen is in larger proportion than natural, the cells retain their distended form, and by accumulation produce those small tumors which are termed *molluscum contagiosum*. When the calcareous matter is in excess, and remains in the flattened cell, the accumulation of these cells constitutes the calcareous sebaceous tumors. In other cases the sebaceous cells from torpidity of the skin accumulate in considerable quantity, and give rise to small sebaceous tumors. The peculiar pathological character of these tumors is their laminated texture, and the identity of structure of their contents with epidermis, most if not all of the peculiar constitutents of sebaceous substance being absent. When the contents of such a tumor as this are extruded from the mouth of the follicle, and become desiccated, they form a hard, laminated, semitransparent mass, identical with horn. A horn of this kind was removed by the author from the thigh of an aged female; it had been some years in growing; it was two inches and three quarters in length by two inches in greatest breadth. The horn was laminated longitudinally, and

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scribe or practise medicine: is this acted on, or is the misdemeanor never committed?

towards the apex was split in the direction of thin laminæ. In minute structure it was composed of flattened epithelial cells, closely condensed, and in some parts having a fibrous arrangement. The cells measured in length $\frac{1}{500}$, and in breadth $\frac{1}{850}$ of an inch, average dimensions. Chemical analysis of horn shews it to consist of albumen, mucus, phosphate of lime, chloride of sodium, and lactate of soda. The author has collected ninety cases of horn, the majority of which occurred in the female subject. Among the older writers horn was a subject of curious speculation. Rhodius met with a Benedictine monk who had a pair of horns, and was addicted to rumination; and Fabricius having seen a man with a horn growing from his forehead whose son ruminated, attributed the peculiarity in the latter to the ruminant character of the former. The most remarkable case of horn on record is that of a Mexican porter, in whom the horn was fourteen inches in circumference around its shaft, and divided into three branches. The author concluded by adverting to the authors on this subject, among whom are Vicq d'Azyr, Sir Everard Home, Alibert, Rudolphi, Cruveilhier, Sir Astley Cooper, and Mr. Travers.

The next meeting will be held on Tuesday, the 13th February, 1844.

ROYAL MEDICO-BOTANICAL SOCIETY.

Dr. Cooke in the Chair.

After reading the minutes of the preceding meeting, Dr. Houlton submitted a long and very interesting paper on Hyosciamus, tracing its use in earlier times, describing the various plants now met with by the pharmaceutical chemist, and concluding with a definition of the characteristics required to distinguish those plants offered as hyosciamus, but which possess but little narcotic power, from the genuine and medicinally useful plant. It would be utterly impossible for us to do justice to Dr. Houlton's paper by a mere abstract; its value consists in the fulness of its details: we therefore proceed to notice some specimens of various fruits and seeds which were laid before the meeting by Mr. Mowbray.

1. *Algarrobas, Carouga, fruit of the Carob Tree, or St. John's Bean (Ceratonia Siliqua, L.)* — Mr. M. observed that the tree which furnishes this fruit flourishes perhaps in the greatest abundance in Spain, where the fruit is used for fattening cattle, pigs, &c. On the shores of the Mediterranean it is also found; but an absurd prejudice to the effect that it is injurious to the neighbouring crops has caused its destruction to a very great extent. Its value has been demonstrated to the inhabitants of Spain during recent events; for during the siege of Barcelona, thousands of the emigrants found a ready food in this fruit, on which many of the lower classes almost entirely subsisted. The specimen submitted to the meeting was picked up by one of those restless and indefatigable travellers, an English merchant, to whose utilitarian views it seemed to offer some allurements, and, together with some more of the same kind, found its way to Mr. M.'s laboratory, with a view to ascertaining the purposes to which it might be applied. By crushing under eage stones, and sifting, the saccharine pulpy interior may be separated from the husk and seeds; subsequent infusion of this powder in cold distilled water, and evaporation, furnished nearly 30 per cent. of an excessively sweet uncrystallizable sugar mixed with gum and a little albumen. The liquor, previous to evaporation, by treatment with nitric acid, gave very well-defined crystals of oxalic acid; and to this manufacture it has been applied on a large scale with much advantage.

Mr. Mowbray next drew the attention of the meeting to some of the seeds of the *Sesamum orientale*, the source of the oil now found in the shps of some druggists under the title of nut oil, arising, perhaps, from a desire to conceal the true origin of this oil, and fairly applicable to it if taste alone were the authority in such matters. This oil is referred to in some works as teel oil, and has been mixed by some druggists with the expressed oil of almonds. The seeds are shipped to this country from the East Indies.

Specimens of the marking nuts of India were next submitted to the meeting by Mr. Mowbray. These nuts are used in India for marking linen, cotton, &c. By cutting the fruit in two, there is found in the interior a kernel, surrounded by cells containing a jet-black liquid of an astringent taste: this liquid, or natural ink, is used by the natives of India for giving an indelible stain, as above observed, to linen and other fabrics.

Seeds of the *Gossypium arboreum* (cotton seeds) were next laid before the Society as being interesting chiefly to the pharmacist, from the fact of their furnishing to the American market an oil wherewith castor oil is much adulterated in the States, and also as a ready means of rendering, by admixture merely, the solidifiable balsam copaiva of Para, S. A. nonsolidifiable.

Much interest was excited by the specimens referred to; and a vote of thanks awarded, in the usual form, to Dr. Houlton for his valuable paper, and to Mr. Mowbray for the interesting specimens and particulars relating thereto, which had been submitted to the Society, after which the meeting separated.

ROYAL COLLEGE OF SURGEONS.

A MEETING was held at the Crown and Anchor Tavern on Monday, the object of which was to take steps for opposing the operation of the Charter lately granted to the College of Surgeons. It was attended by the same class of members, and the various resolutions were brought forward by the same parties, who for some years have taken the most active part on such occasions. As, however, we may be suspected of not being quite impartial on this question, we subjoin a report of the proceedings which appeared in the *Times* of the 31st, and which it will at once be perceived comes from some friendly hand.

A public meeting of the medical profession was convened on Monday evening, for the purpose of considering what steps ought to be taken to resist the aggressive clauses contained in the recent charter of the College of Surgeons of London. The meeting was held at the Crown and Anchor, Strand, and was numerously attended by a body of highly respectable and influential members of the medical profession. Among others present, we noticed Drs. Lynch, Wilson, Mackenzie, Tyler Smith, Mr. Carpue, Mr. W. Harvey, Mr. Ancell, Mr. Borthwick, Mr. Macilwain, Mr. Leeson, Mr. Dermott, Mr. Rug, Mr. Cooper.

Mr. Macilwain took the chair, and after opening the meeting with a neat and appropriate speech, called upon Dr. Lynch to move the first resolution.

Dr. Lynch considered that Sir J. Graham was much to blame for having recently conferred a charter upon the College of Surgeons, without consulting the wishes of the great body of the medical profession. Dr. Lynch entered at some length into the subject of the neglect which several distinguished members of the surgical profession had experienced from the council of the College. Among others, he particularly recognized the late Mr. Brooks, who was ruined by the council of the College having passed his name over, and Mr. Carpue, that "Nestor of modern surgery," who had been infamously treated by that corporate body. The speaker stated that Mr. Carpue would have been present had not indisposition confined him to the house. (At this moment there was a general buz in the room, and a voice exclaimed, "There is Mr. Carpue." As soon as he was generally noticed the whole meeting rose, and the cheering was loud and vehement.) Dr. Lynch, in continuation, said, that Mr. Lawrence had at one period of his life denounced in emphatic language the constitution of the College of Surgeons, but that gentleman had abandoned his former principles, and deserted those with whom he formerly acted in the promotion of the cause of medical reform. (Cheers.) He (Dr. Lynch) admitted that in the list of 300 Fellows recently elected there were some good names, for it was impossible to select from the present body of the profession 300 men without having among them some worthy fellows (laughter); but in the list he saw also the names of many shabby fellows—mere striplings—beardless boys—who certainly had no right to have such an honour thrust upon them. In the list he also saw the names of men whose only claim to the fellowship consisted in their being sycophants to the council—men whose names were to be found upon a brass plate which was placed upon other people's hall doors. Dr. Lynch then referred to the insulting terms which Sir B. Brodie had used towards the great body of general practitioners. Sir B. Brodie had called them "subordinates." That was a gross insult, which no man, whatever his station might be, was justified in using. Dr. Lynch then moved the first resolution, expressive of regret at the delay which had taken place in the progress of medical reform, and pledging the meeting to the adoption of vigorous measures.

Mr. Carpue seconded the resolution. He was much cheered. He considered that the object which the meeting had in view was most important. He had in the course of his life delivered at the least one hundred courses of lectures, and consequently knew experimentally much of the state of the profession. The science of surgery had much advanced of late years. Fifty years ago, he saw one of the chief surgeons of St. George's Hospital occupied one whole hour in performing the operation for the relief of popliteal aneurism—an operation which, in the present day, is performed in three minutes. He considered the conduct of the College in excluding from the council medical men engaged in the practice of midwifery most reprehensible. The man who practises in this department ought to be honoured instead of being degraded. The College of Surgeons did all they could to lower this class of medical men in public estimation.

Dr. Wilson deprecated with much warmth the conduct of the College, and considered that the profession ought to unite to obtain a repeal of the charter.

Mr. Cooper considered that Sir J. Graham, by granting such a charter to the College, insulted the women of England, by degrading those members of the medical profession who practised as accoucheurs.

Mr. W. Harvey, surgeon, Messrs. Webb, Rug, Ancell, Leeson, Dermott, Borthwick, severally addressed the meeting at some length in support of the object for which it

was convened. There appeared to be a spirit of firm but temperate opposition to the charter. No voice was raised in its support. All the resolutions were condemnatory of its clauses. A committee was formed, consisting of the principal speakers, to carry the opposition into practical effect. A deputation is to wait upon Her Majesty's Government on the subject, and members of Parliament are to be requested to bring the matter before the House of Commons.

The meeting did not separate until after 10 o'clock. A large sum was subscribed to defray the expenses, and to carry out the object for which they met.

We observe the following refutation of Dr. Lynch's statement in the *Times* of yesterday:—

To the Editor of the Times.

Sir,—In *The Times* of this day I have read an account of a meeting respecting the duties of the Royal College of Surgeons, in which it is reported of one of the speakers that he "referred to the insulting terms which Sir B. Brodie had used towards the great body of general practitioners. Sir B. Brodie had called them 'subordinates.' That was a gross insult, which no man, whatever his station might be, was justified in using."

I shall feel obliged to you if you will allow me, through the medium of your journal, to state that I never used such an expression on any occasion, and that nothing has been at all times further from my wishes than to depreciate an honourable and independent profession, to whose kindness and favourable opinion I am indebted for so many of the advantages which I have obtained in life.—I am, sir,

Your obedient servant,

B. C. Brodie.

14, Saville Row, Jan. 31.

LECTURE

ON

ABSCESS AND FISTULA CONNECTED WITH THE RECTUM, AND ON FATTY TUMORS,

Delivered in the Theatre of St. George's Hospital, January 17, 1844,

By Sir B. C. Brodie, Bart.

Abscesses of the Rectum—continued.

Gentlemen,—There are two classes of cases in which there are abscesses in the neighbourhood of the rectum which I ought to have mentioned in the last lecture, and which I shall briefly notice in the present lecture in order to supply that deficiency.

I mention the following case as the first that drew my attention to this particular form of the disease. I was sent for, more than twenty years ago, to a gentleman under these circumstances. For some considerable time he had been suffering pain, deep-seated, in the pelvis; there was then a sense of bearing down of the rectum, and what he called violent painful spasms. It seemed not improbable that these were spasms of the *levator ani* muscle. However that may have been, when I was consulted he had been suffering excessive pain for some weeks (coming and going) in the rectum. On examining the external parts, I could discern nothing; but on introducing my finger I felt a large bulging on one side of the gut, extending up much further than the finger would reach. I introduced a lancet by the side of the gut to that point in which this tumor existed, and when the blade had passed not only to the shoulders but quite up to the handle, there came out a large quantity of pus. I then introduced a probe-pointed bistoury, and laid the whole open into the gut. The incision went a good way up by the side of the gut, and I remember that there was considerable hæmorrhage afterwards, which required the pressure of lint and the finger to stop it. The patient was relieved of all his sufferings, the discharge of matter, however, continuing for a considerable time, but gradually diminishing. I saw him for some months, and at last the discharge of matter altogether ceased. The patient remained well from this complaint, but died of another some few years afterwards. There was no evidence, in this case, that the abscess had any connexion with the rectum, except that which was made artificially. I have seen three or four other cases, but I have only kept notes of one of them, and that was the case of a man who died in this hospital. There had been symptoms of one of these deep-seated abscesses high up by the side of the rectum. It presented itself at last by the side of the anus. The patient died, having other complaints upon him, without the abscess having been opened. On examining the body after death, an enormous abscess was found in the pelvis by the side of the gut, which could be traced up, as we thought, to the fascia lining the obturator muscle, and it appeared to us at the time that it had begun between the laminæ of this fascia. No communication could be detected with the gut.

I do not say positively that these cases may not have originated in disease of the rectum, but from the examination of the last case, and from the history of others in which the patients recovered, I am led to think that it was otherwise, and that the disease was merely an accidental formation of matter

in the pelvis which made its way down by the side of the rectum.

Abscesses may form in the neighbourhood of the rectum in cases where there is stricture, or malignant disease, causing obstruction of this part of the intestine. They begin like the common abscesses of the rectum by ulceration of the gut, the difference being chiefly this, that in common abscesses the primary ulceration always takes place just above the sphincter muscle, whereas in these cases it occurs immediately above the obstruction, wherever that is situated, and that is usually about three or four inches above the anus. These abscesses that are connected with obstructions of the rectum from stricture, or malignant disease of the rectum, are generally not formed singly, there being several in the same patient. At first, there is one ulcer and one abscess forms, that bursts externally; and then a fresh ulceration takes place, another abscess forms, and that bursts externally also. They come slowly down by the side of the rectum, and you may have half a dozen such abscesses, or more, all open and discharging matter at the same time. Some of the external orifices are close to the anus, some on the buttock a considerable distance off, and some of the abscesses that have begun to form by ulceration above the obstruction may burst again into the gut below it.

It is right I should notice these cases, in order that you may distinguish them from common fistula of the rectum; not because I have any thing to say about the treatment of them, for it is needless to lay open abscesses connected with such diseases of the rectum. What a length of gut you must have to lay open! what an extent of bleeding there would be from the large incision which would be required! and after all no purpose would be answered; for probably as fast as one sinus was opened a fresh one would be formed. The only treatment such a case requires is this—when an abscess forms and does not come to the surface, but is lying and burrowing under the skin, you may introduce a lancet just to give the matter a free discharge outwardly, and prevent it extending further.

On fatty, or steatomatous tumors.

There are different kinds of fatty tumors, but the most common is the following. The fat resembles ordinary fat, except that it is rather of a more delicate and of a looser texture, and of lighter colour. It is composed of lobules with very thin membranes between them; and externally there is a thin membranous bag in which the whole mass is contained. This bag has a very loose adhesion to the parts in which it is imbedded, but the adeps which it encloses adheres pretty firmly to it.

These tumors, for the most part, form under the integuments in some part where there is naturally adipose structure. You never find them where there is no adeps originally; as, for instance, in the scrotum, the eyelids, or the internal organs. But wherever natural adipose structure exists there this unnatural morbid growth of adipose substance may take place. The tumor is very often not detected when it is of small size. In some instances it remains stationary, but for the most part being once formed it gradually increases in size. It generally begins the patient knows not why or wherefore; but it occasionally seems to originate in some slight injury of the parts in which it is formed. For example, a gentleman was straining to raise his arm as high as he could, and he felt a sort of snap in the shoulder, and soon after that a fatty tumor appeared over the deltoid muscle. A lady was making an effort with her arm; something snapped, as she thought, in a part of the shoulder; soon afterwards she consulted me, and I discovered a small adipose tumor.

The diagnosis of a fatty tumor under the skin is generally sufficiently simple. There is a peculiar sensation communicated by the tumor to the fingers which it is difficult to describe in words, but which, when once felt, you will readily recognise afterwards. Sometimes the tumor is elastic, so that you might almost be led to suspect that it contained fluid, but a little practice will, for the most part, enable him to distinguish better. The tumor is generally pretty well defined, it is not productive of pain, it is not at all tender, and gives the patient no inconvenience, except when it attains a large size, and then it is merely troublesome from its bulk. Sometimes, however, the tumor is not situated in the fat immediately under the skin, but is in some more deep-seated situation. This renders the diagnosis more difficult. I remember a lady who had a tumor at the posterior part of the shoulder, and there were various opinions respecting its nature. No one seemed to be quite positive on the subject. On performing the operation for its removal, the trapezius muscle was found lying over it, some fibres of which being divided, out started a fatty tumor. A lady had a tumor of the breast (I am now speaking of what happened when I was almost a student). She was the wife of a medical man, and she had the opinions of four or five of the leading surgeons of that day. One thought that it was fungus hæmatodes, another believed it to be something else, and another could not say what it was. At last it was decided to cut down on the tumor, and then it was found to be a great mass of fat. It was situated under the gland of the breast, which being of large size, concealed the tumor completety, and being, as it were,

lifted up by it, was made to appear a great deal larger than it was.

When a fatty tumor has a deep-seated origin, it will sometimes make its way out from under the muscle, a small portion presenting itself externally, while the rest remains concealed. You are led to think there is a very small tumor, but when you cut down upon it you find it to be a large one. This happened to me last week. A patient consulted me concerning a tumor below the axilla. It seemed to be a small fatty tumor, about the size of half an orange, but I could not get my fingers behind it. It was evident that I could not trace its origin, and when I cut down upon it I found an enormous tumor proceeding from the axilla. It extended far back apparently into the space between the scapula and the ribs. In fact it was impossible to dissect out the whole of it, and I was forced to tie a ligature in the middle, and cut off the greater part, leaving the rest.

As a fatty tumor increases in size the skin becomes dilated in proportion. When it is of large size a sort of thick fascia is formed over it—such a fascia as is situated over a large old hydrocele or hernia. In different parts of the fascia there are circular spaces, into which the finger will sink as if it were into the substance of the tumor. The skin over a fatty tumor very rarely inflames and ulcerates. One might suppose that the pressure of the tumor would produce this effect, but it is not so. I have, however, known inflammation to take place in the substance of the tumor, and an abscess to form in its centre. A very remarkable example of this occurred to me in this hospital. An elderly man was brought in with an enormous fatty tumor on the back weighing many pounds. It had existed a number of years, and hung like a wallet behind. A year or two before he came in inflammation had taken place in the tumor, and an abscess had formed and burst externally. The abscess never healed, but continued to discharge profusely both matter and a sort of oil floating in it. Is is worth while for me to mention what happened afterwards in this case. I dissected off the tumor, which was easily done, for it had not a very broad origin, and it was a very slight operation. The wound healed very readily, but when it was nearly closed the patient became very ill. I forget the exact symptoms, but I know that we had none of us any doubt that they arose from the sudden cessation of the profuse discharge of matter and grease from the interior of the tumor. These symptoms, however, subsided, and the patient recovered.

We know of no internal medicine, nor of any local application, that will disperse these tumors, and the only thing to be done is to remove them by the knife. This may be done when the tumor is quite small. I do not, however, generally recommend the operation at this period, first, because the tumor may never increase, and as long as it is small it is of no consequence; and secondly, because the operation is really more easy when the tumor has attained a certain size. Still, it is better not to let the tumor go to any *very* large size; and for this reason, lest the pressure of the skin should cause it to contract adhesions to the neighbouring parts. Where such adhesions have taken place, the operation is rendered difficult, and you cannot be certain that you do not leave some small portion of it, which may be the nucleus of a future growth. As soon, then, as the tumor becomes large enough to be troublesome from its bulk, then you may dissect it out, and this is a simple operation if you know how to do it, and very difficult otherwise. Make a free incision of the skin, not upon the tumor, but into it, cutting fairly into its substance. Do not spare the incision through the skin, but let it extend from one end to the other. Then lay aside your knife, and you will find that with the fingers you can easily separate the cyst that contains the adipose matter from the neighbouring textures, pulling out one lobe after another till at last the tumor remains attached only at one corner, that is at the point at which the vessels run in and out. You have no bleeding in any other part of the operation, but in this last part of it you will generally find one or two arteries which you must secure by ligature. When the tumor is situated under a muscle, the operation is to be performed in the same way, with this exception—that besides laying open the skin, you must freely divide the muscle, cutting across the fibres.

There is another kind of fatty tumor which occurs not very unfrequently, but which, so far as I know, is not described in books. It is a deposit of fat, the tumor not being well defined, and there being no distinct boundary to it, so that you cannot say where the natural adipose structure ends, and where the morbid growth begins. I will mention to you one of several cases which I have seen, and which will explain sufficiently what I know of the matter. A man came to this hospital some 17 or 18 years ago, with a very odd appearance—an enormous double chin hanging nearly down to the sternum, and an immense swelling at the back part of the neck—two great tumors as big as oranges sticking out, one behind each ear. The patient stated that these tumors had begun to form three or four years before, and had been gradually increasing in size. They gave him no pain, but they made him miserable: and in fact had ruined him. The poor fellow was a gentleman's servant, and having such a strange grotesque appearance nobody

would hire him. I gave him half a drachm of liquor potassæ three times a day, and gradually increased the dose to a drachm. This was taken in small beer. About a month after he began to take it the tumors were sensibly diminished in size. He went on taking the alkali a considerable time, and the tumors continued decreasing. It was just then that iodine began to have a sort of reputation, much beyond what it deserved, for the cure of morbid growths, and I gave him the tincture of iodine. It was curious that while he took the tincture of iodine he lost flesh generally, but the tumors began to grow again. Finding this to be the case I left off the iodine, and gave the liquor potassæ a second time. He took an immense quantity altogether, and left the hospital very much improved, being directed to continue to take the medicine for some time longer off and on. I had lost sight of him for some time; when I happened to be requested to visit a patient in Mortimer Street. I did not observe the servant that opened the door, but as I came down he stopped me in the hall, and said that he wished to thank me for what I had done for him. To my surprise it was this very man. He had gone on taking the caustic alkali for a considerable time, and you may suppose how much he was improved by his being able to get a situation as a footman. There were some remains still of the tumors, but nothing that any one would have observed. I have seen some other cases of the same kind, and where I have had the opportunity of giving liquor potassæ it seemed to be of great service. But I have not tried it in every case, and I have been informed that in some other cases it has been tried to a great extent without the same good result.

These tumors feel like fat, but there is no distinct boundary, and they are not so soft and elastic as common fatty tumors. This deposit of fat may take place in any part of the body, but I have seen it more frequently in the neck than elsewhere.

There is another kind of fatty tumor, which, aiso, so far as I know, is not described by writers. A patient comes to you having tumors in different parts of the body as if there were absorbent glands under the skin. You will find several in the arm, several in the trunk, and perhaps a great number of them altogether. They generally give no pain, they grow to a certain point, and these do not get larger, but others form somewhere else. They occur in persons apparently healthy in other respects, and are not connected, so far as I have seen, with any other disease. I used to doubt very much what was the nature of these tumors, till at last there being one rather larger than usual in a patient who had several of them, I dissected it out, and it proved to be a fatty tumor; but the fat was of more solid consistence than that belonging to the ordinary fatty tumors, which causes them to give a different feeling to the fingers. They are equally well-defined on the margin. Any one of these tumors that grows to an unusual size may be dissected out without any harm, but there being a great number of them, it would be absurd to think of dissecting them all out. Can anything be done in the way of medicine? I have given these patients the liquor potassæ in large doses, and certainly in two or three cases with very great benefit. The tumors in one case nearly or quite disappeared under this remedy. I suppose that in those, as well as in the other cases of which I have just spoken, the liquor potassæ acts in this manner: the greasy part of the tumor combines with the alkali, is taken into the circulation, and is thus carried off. It was upon this hypothesis at any rate that I was led to give this alkali. Whether it be, or be not, the right explanation, I will not say, but of this I am certain, that the remedy is often a very efficient one. But may the liquor potassæ be taken with safety in such large doses? Indeed it may, if you dilute it sufficiently. You cannot take even half a drachm in two ounces of liquid without its being inconvenient to the stomach, but you may take a drachm and a half in a large quantity of liquid two or three times daily without any harm. The best liquid in which to take liquor potassæ on this and in many other occasions, is fresh small beer. It seems to me to act better in small beer than when it is given in other ways, and the beer does not disagree with the stomach, because the alkali combines with and neutralizes the vinegar which it contains. It is the latter that disagrees with weak stomachs. The alkali and the vinegar together make a diuretic salt, and I suspect that this is advantageous; besides that the alkali is less ungrateful to the taste when taken in small beer than in any other way. However, there are some persons who really cannot take small beer, even with the alkali; and others, with whom small beer generally disagrees, can hardly be persuaded that an alkali alters its quality. If there be any reason for not giving it in beer, it may be given in milk and water, or clove tea, or ginger tea; but then it should be exhibited in smaller doses, because none of the alkali will be neutralised as it is by the acid of the beer. To do real good the alkali must be taken in large doses, and for a long time together—not for weeks, but for months. A patient may take it on and off for a great length of time without any mischievous effects.

There is a very remarkable kind of fatty tumor that sometimes occurs, though it is a very rare disease indeed. It is of rather firmer consistency than an ordinary fatty

tumor, and perhaps there are two or three or more in different parts of the body. When you cut down on it, you find that it is composed of pretty solid fat, and that it is covered with a reflected membrane just as perfect as the peritoneum or the pleura, or any of the reflected membranes of original formation. There is one layer of membrane covering the tumor itself, and then another which forms a loose bag round it; and there is a space between the two membranes filled with a halitus, so that they do not adhere. These tumors are troublesome to remove, because you must remove not merely the tumor itself, but the reflected membrane. How you are to distinguish these cases from other tumors I cannot tell: you can only make out the nature of the case when you have cut down on the tumor.

There is a tumor that occurs in the female breast, which Sir Astley Cooper has called the chronic mammary tumor. It is not a very good name, but no other has been given to it. This tumor is of a peculiar structure, in general lobulated; and when you examine one lobule, you find it is made up of smaller lobules, adhering to each other by loose cellular texture. What is the peculiar appearance which it presents under the microscope I do not know, but by the naked eye it is easily distinguished from malignant and other tumors of the breast. It occurs for the most part in young women, and there is reason to believe that sometimes it disappears spontaneously. I was called to see a young lady some years ago, who had a tumor on one side of the breast; and I thought that the disease was of this description. I recommended her, as it was of some size, to have it removed by an operation. I cut down upon the tumor, and dissected it out, or rather extracted it, which was done very easily in the way which I will mention presently. At the time of the operation it seemed to be not exactly the common chronic mammary tumor, though very like it; but when I examined it afterwards, I found it chiefly composed of fatty substance, but lobulated like a chronic mammary tumor. The wound healed, and there was never any return of the disease. This called my attention to the subject, and since then I have seen other cases, that satisfied me that this chronic mammary tumor has some actual relationship to the fatty tumor, the structure being probably modified by the particular organization of the part in which it is imbedded.

In the case which I have just mentioned, the character of the fatty tumor predominated; but from the structure of other tumors, it appears as if the two diseases run into one another; and even where the characters of the two tumors are most distinctly marked, there is this point of resemblance between them—the adhesion of them to the neighbouring parts is just of the same kind, and they must be removed in the same manner, namely, by dividing the skin, and turning them out with the fingers, there being generally only one point of the tumor at which there is much adhesion, and that is, where the vessels pass in and out. Then I met with this case, which affords a further proof of the relationship between these two classes of tumors. There was a lady who had an enormous tumor of the breast. I could not say that it felt different from the natural breast, but it seemed as if the breast were grown to a monstrous size. I called in Sir Astley Cooper, it being a doubtful case, and the patient being a person of considerable consequence; and he agreed with me in thinking that it was more like hypertrophy of the breast than anything else (for there is such a disease as hypertrophy, that is, an increase of the natural structure of the breast, without any actual change of structure.) There was no hurry about it, and we tried pressure and some other remedies without any benefit. The tumor, however, continued to grow, the patient became tired of carrying about the load, and we recommended her to have the breast removed. Sir Astley Cooper was with me at the operation, and we set about it, believing that I should remove the whole breast. But when I came to cut down upon it, I found that the breast itself lay perfectly sound in front, while the tumor lay at the posterior part, between the breast and the pectoral muscle. I dissected out one portion of the tumor, and it had just the appearance of a chronic mammary tumor. Then, as I went on, I came to a mass of fat, which I drew out in the same manner; and then I came to another mass of chronic mammary tumor, but the whole connected together. The entire mass weighed probably two or three pounds. The breast itself was left perfectly sound. When we examined the tumor, we found it made up of both structures: at one part there was common fatty tumor, and at another chronic mammary tumor, the one being blended with the other, so that they could not be separated. The patient did perfectly well.

I have said that the skin over a fatty tumor does not readily ulcerate, but that matter may form in the tumor, and then that the skin may become ulcerated secondarily. But Sir Astley Cooper used to say, that he had no doubt a fatty tumor would sometimes alter its structure, take on malignant action, and become a malignant tumor. Whether he had any dissections to prove that, I do not know; but I have no doubt that he had seen instances in the living person which sufficiently justified the opinion; and I think the case I am about to mention

proves that he was correct. A farmer from the country came to me with what appeared a fatty tumor on the back. It was as big as your two fists put together, and it had existed for a great length of time. There seemed to be no doubt that it was a fatty tumor, yet it was a little more firm in consistence than fatty tumors usually are. I dissected out the greater part of the tumor; and on examining it afterwards, I found that it was composed of a fatty substance rather more condensed than usual, but that here and there throughout its substance there was a morbid growth, apparently belonging to the class of medullary or fungoid disease. It is reasonable to suppose, that if the tumor had been allowed to remain, it would have ulcerated and run the course of other malignant tumors.

I have thought it worth while to bring this subject of adipose tumors before you, because I think a good many of the facts which I have mentioned, though of course known to practical surgeons, are not to be found in books, and that it will be useful for you to be taught them, and not to be left to find them out altogether for yourselves.

MEDICAL REFORM.

To the Editor of the Medical Gazette.

SIR,

A PERIOD of calm has succeeded the storm which has been so long raging with regard to "medical reform," and whether I am justified in making any endeavour to revive the commotion is a point which I leave to your judgment.

Now, sir, I must avow myself in politics a Conservative: I have no desire to behold that utter subversion of those institutions which were founded by the wisdom of our ancestors, and to overturn which is the desire of men guided by the marsh-lights of self and faction; but, inasmuch as no human institute is or can be perfect, and as the state of society undergoes a gradual change which requires it, so I am willing to concede the necessity of an occasional and gradual modification of existing laws. The great point of agitation aimed at appears to be the rearrangement of the whole genus—the manufacturing of new classes of practitioners, and abolishing old ones. Various have been the plans proposed. According to some, the "Hall" is to be quashed; that is, to be confined to making and dispensing drugs; the Colleges of Physicians and Surgeons are to be amalgamated—to become somehow chemically combined and decomposed into different grades, and many other plans equally pretty in theory, and equally impracticable and unnecessary: for, with all becoming deference to many celebrated advocates for reform, it appears to me that the existing grades of physician, surgeon, and general practitioner, are such as are required by, and which, indeed, have sprung from, the existing state of society. And what, let me ask, is the use of making new ranks if the individuals who compose them are not advanced? and here it is that I wish to advocate reform. Let me confine my observations to the student. Is it not a humiliating fact that men should waste their time and talents for two or more years, and then in six, or even three months, be worked up by a "grinder" to pass the examination of the Royal College of Surgeons? The fact need not be dwelt upon: it is one of the "great facts" of the time. And are such persons as these fit to be entrusted with the lives of Her Majesty's subjects? True it most certainly is that a very great number of those who go up for their diploma are in an eminent degree deserving of it; but the very fact of these "grounds" passing, reflects a disgrace on the College which ought speedily to be removed; and it surely must appear to every candidate, who has laboured to acquire a thorough knowledge of his profession, to be very little, if at all honourable, to pass that examination.

What, then, is the remedy? How can the death-blow be given to the office of "grinder," that is, to the "professional grinder?" The plan is simple,—is not new,—is easily put into operation, and has the sanction of the most learned bodies. At our Universities of Cambridge and Oxford, each college has an examination annually for men of the same year. Why, then, should this not be at our medical schools? Each student should, I think, be required to pass three of these annual examinations, which should be conducted by printed papers. That of the first year should embrace the subjects of chemistry, materia medica, and anatomy simply descriptive. In the second, anatomy, physiology, surgery, and medicine. In the third, midwifery, and a general examination on all subjects. They would, of course, be compulsory, and failure in one would throw the student back twelve months. Then, of course, prizes should be given to the student who is most proficient in each subject; and I should imagine that at many of our schools a fund might be established for a scholarship to the best general proficient. If such a reform as this could be effected, the student would take a much higher standing than he at present does, and the whole profession would, in a like degree, be advanced to a higher degree of dignity. The University of London has set the example of what examinations ought to be, and it is not a very gratifying circumstance to think that members of the College should be twice rejected at the M.B. examination. Let the

College follow this example. Let the examinations for the diploma, instead of taking place every Friday evening, take place every three months. The income of the College may possibly be slightly diminished by this mode of action, but a lustre will be reflected on that body by the members it will send out, which will raise it from its present twilight dignity into the clear and ever-beaming light of honour and renown.

I am, sir,
Your obedient servant,
D. H.

January 16, 1844.

HOSPITAL VISITS.

To the Editor of the Medical Gazette.

Sir,

Might I be permitted, through the medium of the Medical Gazette, to ask some of the medical officers of the metropolitan hospitals why the physicians and surgeons go round their respective wards at the same hour of the day, thus limiting the students to see either the medical or surgical practice, instead of affording them every opportunity of witnessing both, which, of course, would be the case if the physicians would attend the hospital at one hour, and the surgeons at another? I consider it especially hard, in cases where young men, like myself, have entered, and paid their fees as "perpetual students" to both practices; because if they attend regularly the three years' surgical practice required by the College of Surgeons, they are debarred from seeing, comparatively, any medical practice.

Hoping I have not taken too great a liberty in thus troubling you,—I am, sir,

Your most obedient, humble servant,
A Medical Student.

January 20, 1844.

[The Hospital visits are not literally made by all the officers at the same time, but we must say there is too much cause for the complaint made above, and we should be glad to see it removed.—Ed. Gaz.]

NEURALGIA OF THE URETER.

A gentleman, æt. 31, of a dark complexion and bilious temperament, somewhat emaciated, and with a countenance expressive of habitual suffering, came to me in the year 1839, complaining of the following symptoms: about four months before, he was attacked suddenly, for the first time, with acute pain, shooting from the direction of the kidney towards the corresponding testicle; the pain frequently extended down the inner part of the left thigh, and was so excruciating as on one or two occasions almost to produce swooning, and generally brought on tendency to vomiting, sometimes violent retching. The principal seat of the pain was in the region of the kidney and along the course of the ureter. These attacks, at first occurring only once or twice a week, had latterly increased very much in frequency; the period they occupied varied from a few minutes to several hours.

This gentleman had always very active habits, and was much addicted to field sports. Many members of his family had suffered from gout. He never recollected having any lateritious deposit from his urine, nor had he ever passed small calculi. He had formerly drank hard, and had been much addicted to venery. He twice had clap; the last time, six or seven years before, was a very bad one; he never had stricture. He had lumbago, from exposure to cold, two years ago, which was cured by friction with turpentine.

He had no tenderness on pressure in the renal region, no pain in making water, which was emitted in a full stream, no tenderness, enlargement, nor deformity of the prostate. His appetite good, bowels regular, pulse natural.

His urine was of an amber yellow colour, depositing, upon cooling, a light cloud of epithelium, specific gravity 1019, acid in its reaction, not albuminous.

What should be the diagnosis in this case? It was not nephritis; the pains commonly attributed by authors to this disease really belong, as M. Rayer has shewn, to inflammation of the calyces, infundibula, and ureters. The extreme severity of the pain, together with the absence of albumen or pus in the urine, forbids its being attributed to the latter inflammation. From nephritic colic it differed in its long continuance, the absence of blood in the urine, the absence of calculi, and the pulse remaining undepressed, unremitting, and regular, during the attacks. The absence of pain during abduction and extension of the leg, forbade the idea of its being psoas rheumatism. The only conclusion to which I could arrive, after the most careful consideration of the symptoms, was that it was neuralgia of the ureter, probably involving the continuation of this duct in the substance of the kidney.

This gentleman had been cupped repeatedly, and treated alternately by acids and alkalies, before I saw him: I ordered him, in accordance with my diagnosis, large doses of carbonate of iron. I am unwilling to ascribe the rapid improvement which immediately followed to the influence of this medicine, having so frequently seen it fail in removing other neuralgic affections, but certain it is, the paroxysms very shortly ceased, and during a period of four or five

months that I afterwards occasionally met him, he assured me that he was completely cured, and his improved appearance corresponded with this statement.

Since that time I have met, in dispensary practice, with three or four cases similar to the foregoing, but less violent in their symptoms; and I am led to think that neuralgia of the ureter is a less rare disease than what is generally supposed.—*Dublin Journal of Medical Science.*

ACQUISITIONS TO NATURAL HISTORY.

The *Allier*, corvette, after remaining four years in the archipelagos of the Pacific Ocean, returned to Brest in October last. She repeatedly visited New Zealand, the Marquesas, Otaheite, &c.; in short, all those places where so many treasures still remain to be explored for natural history.

M. Raoul, the navy surgeon, whose talent is only equalled by his zeal, has brought back fifteen chests from this long voyage; and their opening, at the Museum of the Naval Hospital, attracted a crowd of learned and curious spectators. The extensive herbarium, which has been preserved with singular care, is described in a *catalogue raisonné*, with drawings, which give a perfect image of nature, and preserve those characteristics which are always lost in part by drying.

His collections of birds and shells are equally valuable. The labours of this diligent *confrère* will enrich our cabinet, and clear up more than one obscure point in science.—*Gazette Médicale de Montpellier.*

ON THE BEST METHOD OF REMOVING THE STAIN PRODUCED BY CHEMICAL MARKING-INK FROM LINEN TEXTURES.

By Boettger.

Nitro-muriatic acid has been recommended for this purpose; but, without entering into the obvious demerits of this agent, which is neither fitted for general use, nor suited for cambric or fine linen, I propose *a concentrated solution of Liebig's cyanide of potassium, as a sure and harmless means* of removing the stain of marking-ink from linen textures.

In the preparation of this salt, it is essential that the ferrocyanide be as free as possible from sulphate of potash, to prevent the generation of a combination with sulphur during the process of heating, which would entirely defeat the object.

Names and marks on linen or wearing apparel, of *many years' standing, may be totally and effectually removed from the finest cambric, even without the slightest injury to its texture*, by rubbing the mark gently with a rather concentrated solution of this cyanide of potassium. If a stain of common writing ink have been used in addition, in marking the linen, a hot concentrated solution of oxalate of potash must be afterwards applied. The red and black stains produced on the skin by the solutions of the salts of silver and gold may be perfectly removed by a solution of the above mentioned salt. It is necessary, however, to observe, that the skin should be intact, as this salt produces ill effects, if applied to open sores.—*Annalen der Chemie und Pharmacie;* and *Pharmaceutical Journal.*

LOCAL APPLICATION OF CALOMEL IN OPHTHALMO-PLENORRHŒA.

By Dr. Laner, of Berlin.

Dr. Laner is able to verify, according to what has already been announced by some practitioners, especially by Dupuytren, Fricke, and M. Mayor (of Losanne), that this remedy produces excellent effects in the second stage of all the inflammations of the conjunctiva, by favouring resolution, but that it is especially productive of advantageous results, in cases of scrofulous inflammation, by hastening the progress of the resolution, and by removing, as by enchantment, the distressing symptom of photophobia.

He is also able to acknowledge the justice of the interesting observation made by Fricke, that calomel, applied to a healthy or diseased eye, determines only a disagreeable but transient sensation, whilst it irritates and inflames the conjunctiva to such an extent as to give rise to chemosis, and that in a very short space of time, when put in contact with the eye of a patient who is using a preparation of iodine internally.

It appears, from an observation of Fricke, that an iodide of mercury is in this case formed.

Drs. Kluge and Knippa have for some time, commenced employing this remedy, and its success has been at once so rapid and so decided, that no other treatment is resorted to in the obstetrical establishment of charity, at Berlin. The author exclusively employs it in all cases of ophthalmo-plenorrhœa, and Dr. Liebold has assured him that in his *clinique obstetricale*, at Gottingen, its success has been no less decided than at Berlin.

The following is the mode of applying this treatment:—

A small hair pencil is impregnated with the finest possible powder of calomel; and, while an assistant raises the superior eye-lid, and lowers the inferior, the pencil is gently

struck, so that the powder which escapes from it may fall on the surface of the eye. This operation may be repeated a second time, if, in the first, a sufficient quantity of calomel have not arrived on the surface of the conjunctiva.

The contact of this powder causes an irritation so slight that, immediately after the application, the patient can open the eye.

In the ophthalmo-plenorrhœa of newborn children, it should be resorted to on the appearance of the first symptoms of disease. One application *per diem* is sufficient; but, if the symptoms acquire great intensity, and if the disease appears to make rapid progress, two applications should be made in the twenty-four hours. In this case, it is indispensable to wash the eye frequently, in order to free it from the abundant secretion; at the same time, it is advisable to favour alvine evacuations, by the internal administration of calomel.

In general, by means of this treatment, cure is obtained in from four to ten days.—*Chemist.*

FRENCH ELECTIONS.

At the late concours for the Chair of Natural Philosophy, M. Gavarret and M. Maissial obtained an equal number of votes. M. Pouillet, the President, having then declared his vote to have been in favour of M. Gavarret, that gentleman was duly elected Professor of Natural Philosophy.

The other candidates were M. M. Guérard, Person, and Baudrimont.

The following presentation-list for replacing M. Edwards at the Academy of Moral and Political Sciences has been communicated.

In the first line, M. Peisse.

In the second line, *ex æquo*, M.M. Bucher, Dubois (of Amiens) Gurnier. and Lelut.—*Gazette Médicale de Paris*, Jan. 5, 1844.

THE BRODIE MEDAL.

A very handsome bronze medal has just been executed, having on one side a most excellent likeness of Sir Benjamin Brodie, while on the reverse is a female figure feeding the lamp of science. Beside the former appears merely the word Brodie; the latter has round the circumference the following sentence:—*E tenebris tantis tam clarum extollere lumen qui potuisti:* and beneath—Consocii et Discipuli gratulantes. mdcccxli.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, Jan. 19, 1843.

J. M. Howell.—G. R. Nuttall.—F. Harvey.—E. Leclerc.—C. G. Read,—G. M. Tracy.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, January 20, 1844.

Dropsy, Cancer, and other Diseases of Uncertain Seat	81
Diseases of the Brain, Nerves, and Senses	183
Diseases of the Lungs and other Organs of Respiration	348
Diseases of the Heart and Blood-vessels	31
Diseases of the Stomach, Liver, and other Organs of Digestion	69
Diseases of the Kidneys, &c.	8
Childbed	9
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	2
Arthritis	0
Rheumatism	8
Diseases of Joints, &c.	8
Carbuncle	0
Phlegmon	0
Ulcer	2
Fistula	0
Diseases of Skin, &c.	0
Old Age or Natural Decay	89
Deaths by Violence, Privation, or Intemperance	20
Small Pox	21
Measles	26
Scarlatina	49
Hooping Cough	26
Croup	5
Thrush	6
Diarrhœa	5
Dysentery	5
Cholera	2
Influenza	3
Ague	0
Remittent Fever	0
Typhus	35
Erysipelas	4
Syphilis	1
Hydrophobia	0
Causes not specified	4
Deaths from all Causes	1040

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32 *N. Longitude* 0° 3′ 51″ *W. of Greenwich.*

January.	Thermometer.		Barometer.	
Wednesday 24	from 43	to 29	29·84	to 29·85
Thursday . 25	27	42	29·91	29·80
Friday . . . 26	34	44	29·88	29·92
Saturday . 27	38	48	29·92	29·85
Sunday . . 28	51	43	29·63	29·55
Monday . . 29	35	48	29·69	29·52
Tuesday . 30	49	41	29·54	29·31

Wind.—24th, N.E.; 25th, S.W.; 26th, N.W.; 27th, W. by S. and N.; 28th, S.W. and N.W.; 29th, S.W. and S.; 30th, W. by S.

Weather.—24th, generally clear. 25th, cloudy, rain in the evening. 26th, clear. 27th, cloudy. 28th, rain in the morning, otherwise generally clear. 29th, morning clear, afternoon cloudy, with rain. 30th, generally clear till the evening, when rain fell, with high wind.

Charles Henrry Adams.

NOTICES.

"Malatesta" and "Forensis."—We do not like to insert anonymous criticisms of papers which have the authors' names.

Dr. Badeley's letter next week.

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, FEBRUARY 9, 1844.

AN ESSAY

ON

THE MEDICAL TREATMENT OF PERMANENT STRICTURE OF THE URETHRA,

Read before the Physical Society, Guy's Hospital.

By John F. France,

Assistant Surgeon to the Eye Infirmary of Guy's Hospital.

The following observations were written in the hope of drawing into more general notice the utility of a careful therapeutic course and dietetic regulations in cases of permanent stricture, and of illustrating the principles on which such a system is beneficial; for although, by some scientific surgeons, such resources are not overlooked, yet it is to be feared that, by the great majority of the profession, they are disregarded, or, indeed, their efficacy denied, except when other local or constitutional disease coexists; and even in the more approved works on this complaint, mechanical dilatation, and the various ways of effecting it, are the predominant, if not exclusive, themes of discourse under the head of treatment.

Before the days of Sir A. Cooper it would seem to have been a frequent, if not invariable practice, in some places at least, to salivate stricture patients, under the impression that their disease was syphilis. Thus Benjamin Bell, a surgeon of great industry, and apparently of much experience, lays down the following rule: "Whatever," says he, "may, in disorders of this kind, be the immediate cause of obstruction to the free passage of the urine, a venereal taint is in general to be considered as the original cause of the whole: we have therefore desired that, at the same time the use of bougies is persisted in, the patient ought to be put upon a *very complete course of mercury*, in order to destroy every possibility of his suffering again from the same cause; for we need scarcely observe that, so long as any venereal infection continues to prevail, little or no permanent advantage can be expected, either from the use of bougies or from any other remedy;" and, if I mistake not, the prevalence of these principles was borne witness to, and combated, by Sir Astley: hence, in fairness, we are compelled to acknowledge that, in the hands of men who thought and acted as Benjamin Bell seems to have done, this class of patients were little likely to suffer from *want of physic*. Can it be, that we owe to such erroneous practice our subsequent indifference to the auxiliary powers of medicine in this complaint, even as in other cases misguided zeal so often gives place to apathy?

General neglect of therapeutic resources certainly *primâ facie* implies their experienced inefficacy; but this conclusion (believing it to be a mistaken one) I shall, in the following pages, oppose; and in doing so it is necessary to inquire from what class of medicines, independently of those which combined disease may indicate, assistance can be expected in the cure of stricture.

There is a tendency, in many diseases, to pursue a certain defined course, and then subside: it is most evident in the exanthems, in fevers, and the phlegmasiæ; and equally true, though masked perhaps by circumstances, in inflammatory local complaints. Thus, a phlegmon, having reached its point of greatest activity, will terminate, as the case may be, in resolution or abscess, and the normal condition of the part will usually then be gradually reestablished: so a peritonitis, an erysipelas, an iritis, are as really disposed to decline, and allow the natural action to be resumed, after having reached a certain point, as before that period they are prone to increase in violence. It is true, indeed, that according to the severity and activity of the inflammation, according

to the patient's powers, the vital importance of the part inflamed, or the delicacy of its structure, either life or the utility of the organ may, in the course or issue, be threatened or sacrificed; still, though the effects may be permanent, the disease itself tends absolutely to cease.

But should it so fall out, that the part affected is one continually exposed to circumstances calculated to originate, renew, or maintain the disease, then the disposition to subsidence, though not annihilated, is cancelled, and its accomplishment indefinitely deferred: hence arises the obduracy of some forms of conjunctival disease, and of amaurosis in artisans depending on their occupations for their livelihood; the intractability of inflammation of the synovial membrane, if the motions of the joint be not suspended, and the inveteracy of fissured ulcers about the anus. Now, although the effusion into the submucous cellular tissue of the urethra, which constitutes in most cases a permanent stricture, is not, indeed, like the foregoing examples, an original disease, but, in the majority of instances, a consequence of antecedent inflammation (as Key, Hodgkin, and others, agree), still, if analogy hold, as it is reasonable to presume it does, between this and other local plastic effusions into the cellular membrane, like them, if unimpeded, its reabsorption would spontaneously advance.

[In this particular appears a difference between the habit of ordinary serous membranes and that of the cellular: the former are more inclined to organize adhesive matter once poured out, and render it permanent, as is continually manifested in the peritoneum, pleura, pericardium, and aqueous capsule of the eye; the latter, to remove it again into the mass of the circulating fluids, as instanced in the eventual disappearance of the indurations around abscesses, wounds, tumors; the flattening down and disappearance of interstitial tubercles in parenchymatous iritis, &c.]

The preceding remarks are sufficient to establish the importance of removing whatever obstacles may exist to the full exertion of this salutary action of the absorbent vessels in cases of permanent stricture, an indication which (if not altogether chimerical) demands equal obedience with that directing us to stimulate those vessels, as by the pressure of instruments we are wont to do.

What obstacles, then, are there? To what peculiar influences is the urethra obnoxious? The double function of the canal at once suggests itself as palpably the operative drawback upon the *vis medicatrix*.

That the high state of excitement, vascular and nervous, into which the urethra is thrown during coitus, must greatly contribute to aggravate morbid action, is so obvious and unquestionable, that I shall content myself with simply pointing out the fact, and adding, that he who would most successfully combat stricture of the urethra must authoritatively interdict sexual indulgence to his patient.

But the function of the urethra as a urinary organ cannot be thus summarily dealt with, nor its exercise be suspended at pleasure: here is a duty which, injurious or not, must be performed several times a day: hence repose, so needful to every part of the body when the seat of disease, is here unattainable. Much, however, depends upon our understanding this fact properly, and not remaining content with the bare statement, in general terms, that the function of the urethra will not permit a state of quiescence. Indeed, such an expression is true in a very modified sense only, the canal itself being absolutely passive during micturition, except when the last few drops of urine are expelled; for, anteriorly to the bulbous portion, there is no muscular apparatus; and posteriorly to the same, the action of its muscles produces contraction of the calibre, and so would rather impede than facilitate the transit of the urine: and this view is confirmed by our finding, after death, muscular hypertrophy of the bladder, and not of the urethra, in connection with stricture.

Such being the case, the process of micturition, as it affects stricture, may be reduced into three parts, to one or more of which we must attribute whatever influence the function of the urethra exerts in protracting its diseases. These are,—the muscular effort,—the passive opening or distension of the canal,— and the application of urine to its surface.

1. It is difficult to conceive that the urethra sustains any detriment, or hindrance to recovery, from its expansion in micturition, if, as I have endeavoured to substantiate, it be indeed passive during that process. In the majority of permanent strictures (previously, at least, to operative interference) there is no ulceration, and the continuity of the mucous membrane is perfect. Were it otherwise, an analogy would be established between strictured urethra and fissured anus: every time an evacuation should be attempted, the ulcerated, but perhaps healing, surfaces must needs be torn open afresh; and we can readily understand how decidedly this would oppose return to a state of health. But, on the contrary, while the urethra is free from ulceration, far from having grounds to believe that its mere dilatation in micturition is injurious, we know that similar dilatation, if gently effected by art, is one of the most efficacious means of cure. We must seek, therefore, in the mpelling muscular effort, or in the reterated application of urine to the diseased

part, for that circumstance in the function of the urethra really inimical to its restoration.

2. Now muscular effort in micturition being only exercised upon and by the bladder, its effect upon the stricture can be indirect alone. Patients suffering from these obstructions are compelled, in order to evacuate the bladder, not only to allow contraction of the muscular coat of that viscus, but to call into auxiliary action powerful voluntary muscles—all those, in short, which, forming the parietes of the abdomen, are capable of compressing the contents of that cavity. But in doing so, not the viscera of the abdomen alone, but the blood-vessels also, sustain their share of pressure; and the venous plexus immediately under the prostate gland and bladder (from which, as well as from the penis and urethra, its radicles spring), and over the levator ani, cannot escape severe and direct compression by the strong action of that muscle antagonized from above: and when we reflect that, in bad cases, the violent congestion thus caused is renewed very many times a day, and on each occasion is continued for some minutes, we cannot but admit its highly injurious influence on the disease.

It is only in this indirect manner that the muscular effort of micturition can prejudicially affect the strictured portion of the canal: with the changes produced by it behind the seat of stricture I have at present nothing to do.

3. The influence exerted by the flowing urine upon the channel it traverses must bear relation to the properties of the former and the susceptibility of the latter: thus, when the urethra is healthy, we find highly concentrated urine will irritate it, as often exemplified in spasmodic stricture supervening after excess at table; if, again, the urethra be inflamed, healthy urine will produce the same result as in gonorrhœa.

I cannot think that either augmented irritability of the canal in sympathy with disorder of the stomach and general constitution (to which some attention has been bestowed), or the varying powers of stimulation possessed by the urine in disease (which has been much less regarded), has received that extended and particular consideration, which the importance of each in the study and care of these cases demands. A quotation or two, however, will suffice to show that even the latter point has not been altogether overlooked. Thus Brodie, perhaps our highest authority upon diseases of the urinary organs, teaches, that the injurious effects of acidulous beverages, and of blisters, upon stricture, arise from their imparting additional acrimony to the urine; and he states, in the commencement of his work, that "whatever increases the stimulating qualities of the urine, so as to make it a cause of irritation to the parts with which it comes in contact, may lay the foundation of spasmodic stricture, and this, whether the excess of saline ingredients be of acid or alkaline reaction." The same author subsequently speaks of "the liability to spasm in permanent strictures being sometimes increased by a too abundant secretion of lithic acid by the kidneys;" and adds his evidence, how highly conducive to the success of the local treatment the correction of this state of the secretion proves: to use again his own forcible words, it will "enable you to accomplish by means of the bougie what you would in vain have attempted to accomplish otherwise." He, however, limits the utility of medicine to those cases in which such disorder of the urine exists.

Mr. Stafford, who wrote a useful monograph on stricture, with the view of recommending the lancetted stillette, alludes to cases of stricture depending on extreme irritability of the canal, or over stimulating urine, and refers to the latter becoming so in consequence of indigestion.

These quotations vindicate the truth of the position taken above, viz. that a very important influence is exercised upon the urethra by the fluid applied to its surface; I am, however, concerned to prove more than this, viz. that the influence in question most commonly tends to protract disease, and that, although the urine may be in a perfectly healthy state*. This belief was first impressed on my own mind by some cases which fell under my care several years ago, when dresser at this hospital, and has been confirmed by subsequent thought and experience. I will first briefly narrate the principal points in these cases, premising that they are by no means singular; rather do they form examples of what commonly occurs under the same circumstances; as many observant surgeons who have practised the operation here used, or those which in principle are allied to it, can bear witness.

William Wrenn, æt. 49, was admitted into hospital, March 7, 1838, with permanent stricture. The disease had followed a blow on the perineum from falling astraddle on a chair six years before; since which, difficulty of micturition had gradually increased, and about three years before his admission had given rise to retention and extravasation of urine. After recovering from these dangers, he still laboured under chronic cystitis; his urine was ammoniacal, loaded with mucus, and sometimes he was forced to

* There may appear an inconsistency in urging this point after having stated that the cellular tissue beneath the surface is the seat of stricture, but it must be borne in mind, that while submucous effusion is the source of obstruction, chronic inflammation in the lining membrane and its diverticula is the cause of that effusion.

evacuate it every five minutes. When received into hospital he was found to have, in addition to the symptoms just named, a stricture utterly impermeable to catheter or bougie, while the urine passed away, not by the contracted urethra alone, but also by several fistulous openings in the perineum and scrotum, and even above the pubis. During his residence in hospital he had another attack of extravasation of urine, treated in the ordinary way, by free incisions into the infiltrated tissues, &c; and a severe diarrhœa, which then supervened, caused the further treatment of the stricture to be for the time postponed. A consultation was now held, and the long duration, impermeability, and obstinacy of the stricture, having been considered, the propriety of opening the urethra behind it was decided upon. For six weeks after the operation, the urine having a free outlet by the wound in the perineum, the stricture was not interfered with, but left in entire repose, neither urine nor surgical instrument being applied to it. At this period, however, examination being made, it was discovered that the urethra had spontaneously recovered itself to such a degree that a No. 5 catheter could with little difficulty be passed through the whole canal. From this time the cure progressed uninterruptedly to completion; chronic cystitis subsided, the fistulæ closed, the urine was passed exclusively by the urethra, and might be retained for several hours without inconvenience.

The foregoing it will be allowed is a striking proof of the existence of that self restorative power in the urethra, on which I dwelt at first; only needing, it would hence appear, suspension of the function of the canal, (or in other words relief from contact of urine, and from congestion arising as above explained), ere it exert itself with equal energy and effect. The same result we are warranted in believing would more quickly be achieved, in less inveterate cases, under the same circumstances; for it will not escape notice that in this instance the disease was of the most intractable kind—of traumatic origin, many years' duration, and to a degree amounting nearly to a perfect closure of the canal. The following case is closely parallel to the preceding.

John Kelly, a sailor, æt. 49, was admitted March 28, 1838, with permanent stricture, the commencement of which he ascribed to a blow on the perinæum ten years before, followed immediately by hæmorrhage from the urethra and abiding difficulty of micturition. He was much neglected, much exposed to vicissitudes, and underwent a great variety of treatment, in this country and America, with varying success; the stricture having been more than once temporarily cured, but returning again with equal or increased severity. At first catheters and bougies relieved him; then they failed, and recourse was had to the lancetted stilette, with which the contracted portion of the canal was pierced. He derived the greatest benefit from this operation, followed up by the introduction of bougies; but the effect was transient: on return to his duties the complaint recurred; and when he was admitted a remarkably callous stricture was found extending from an inch or two anterior to the bulb, nearly to the apex of the prostate gland; the firm indurated effusion being easily perceptible in the perinæum. The urine was extremely ammoniacal, and deposited brownish mucus of alkaline reaction: each attempt at micturition was made with much pain and straining, and so frequently as to preclude rest by night or day. It was found impossible to penetrate the stricture by ordinary sounds; the caustic bougie was therefore employed, but without making material progress, while it augmented the irritability of the canal, and produced paroxysms of intermittent, with still greater deterioration of appetite, strength, and rest. After patient continuance with these, in conjunction with various palliative medicinal means, for some weeks, an abscess formed in the perinæum, and was lanced. A few days afterwards it was determined to cut into the membranous portion of the urethra. The course of the urine was thus diverted, the patient was greatly relieved, and less than five weeks interval elapsed before a successful attempt was made to introduce a No. 4 catheter. The disease from that period yielded steadily and satisfactorily to the ordinary treatment by dilatation.

This case, like the former, developes the existence of an inherent disposition to recovery in the strictured urethra, the conditions necessary for its successful operation seeming to be, freedom from the venous congestion induced by straining at micturition, and simultaneous cessation of the action of the urine on the lining membrane.

Is it, then, too much to infer from these facts, that the urine derives from its saline constituents an irritating property highly conducive to the maintenance of disease in the urethra?

This opinion, first suggested to my own mind by the cases just related, has many strong grounds of support. I will cite in its favour another case or two. In the Guy's Reports, about a year ago, was given the history of a man, who had a stricture so firm and impenetrable, that in the endeavour to pass it, a false passage was inadvertently made into the bladder, and this not being discovered, was exclusively employed for some time. Meanwhile, the stricture, thus left to itself, became to a certain degree relaxed, and one day to the surgeon's surprise

readily admitting an instrument, informed him of the existence of a false passage, at the same time that it apprised him of the recovery of the true. Brodie tells of a gentleman who had suffered from stricture of the orifice of the urethra from childhood: this part was ulcerated, inflamed, and tender, and so continued despite treatment, until the extremity of the canal was laid open freely, and thus relieved from irritation. The same surgeon gives his testimony to a fact which bears weightily upon the present question, when he says, "rigor seldom follows the use of the bougie immediately; it almost always occurs after the patient has voided his urine, and seems to arise, not as the immediate effect of the operation, but in consequence of the urine flowing through the part which the bougie has dilated;" and Sir Benjamin goes on to say, that the protection of the surface of the urethra from the contact of the urine by the use of a gum elastic catheter, has, with him, invariably succeeded in preventing this unpleasant symptom. In like manner, Guthrie gives a case, in which the urine passing over the stricture, after the use of an instrument, always caused spasm and fever, or retention, and in which the continued use of the gum catheter gave entire relief. The same author remarks upon the facility with which strictures are cured, after puncture of the bladder has emancipated the urethra from its office; a fact well known to most practical surgeons as true of the sister operations likewise.

From all this it is pretty clear, that the urethra, when the subject of stricture, undergoes an amount of irritation from the highly stimulating properties of the urine, sufficient in some individuals to excite most violent and obvious effects; but not the less certainly impeding the cure, when these severe symptoms are not manifested; inasmuch as liberation of the membrane from contact of the urine (whether by operation or gum catheter), is constantly followed by a rapid improvement the most decided. And in perfect harmony with this view are the phenomena produced by irregularities in regimen or diet, when we find a patient with permanent stricture, and habitual difficulty of micturition, experiencing total inability to evacuate the bladder after a feast or debauch, when the urine is more than ordinarily loaded with saline matters; or after sexual intercourse, when the canal, already morbidly susceptible of the natural stimulus of the urine, is rendered so in a still higher degree.

There are, then, two elements in the act of forced micturition, which have a direct influence in keeping alive diseased action in the strictured urethra; one being the application of an acrimonious fluid to its surface; the other, venous congestion of the mucous membrane and the circumjacent tissues. Now there is but one method in which both can be completely avoided; viz. by resorting to operative measures, with the aim of diverting the course of the urine, as exemplified in the cases first detailed: in this way, all effort in evacuating the bladder is rendered needless, while the urethra, like a maniac in seclusion, is set free from the reiterated irritation it was before subjected to, and left undisturbed, to resume in tranquillity a healthier condition.

This plan, however, it were almost superfluous to remark, is applicable in a comparatively small number of cases only, viz. 1st, when retention of urine produced by absolutely insuperable stricture calls aloud for immediate and decided remedy; 2dly, in cases of long-standing impenetrable strictures, which have resisted patient and well-directed attempts to introduce instruments, and create much suffering after these endeavours. Oftentimes these cases are accompanied by ammoniacal urine loaded with mucus; and they threaten, by their long continuance, by the agony they cause, by disturbance of the natural actions of the whole urinary system, as well as of the patient's sleep, appetite, and spirits, to impair the organic integrity of the bladder, ureters, and kidneys, and irretrievably to undermine his constitution. In such cases (and they are far from infrequent), if not already too far advanced, I unhesitatingly advocate the operation above alluded to, as the more lenient measure, relieving the patient from much greater and more protracted pain and danger than it inflicts.

But while few cases, comparatively, require this extreme course, yet the same principle, on which it effects the cure of stricture, is applicable in the treatment of the disease generally. By this mean, indeed, we at once place the urethra in repose; but by others, we may prevent it being violently congested, or strongly irritated, and thus place it in a condition, approximating at least, to the former. Towards the attainment of this end we have an important source of assistance (in addition to tonic and alterative medicines, which, by improving the constitution of the patient, dispose all parts of his body to more kindly action, and anodynes which soothe and tranquillize his system generally), in the power of divesting the urine in great measure of its acrimonious qualities; so lessening its energy both as a local irritant, and as an exciter of spasm. Regulating the food and regimen of the patient—restricting him to the observance of a plain and simple (nourishing it may be, but) unstimulating dietary—providing that the secretions of the liver and skin shall be carried on with proper activity, and separate their due share of the debris of the body from the system, nor throw (as is too often done by their failure more than its proportionate duty in thi behalf on the kidney;—all will greatly con

tribute to this immediate aim, and much, very much, may be done by care in these respects. Highly essential, too, is it that the bowels should be kept free,—not purged. Abernethy (to whom we are so much indebted for directing attention to the intestinal canal and its appended viscera, and) on whose recommendation many suppose they employ active purging in various complaints, is said to have altogether disclaimed experience of its effects; his desire was to keep the bowels gently open, not to produce diarrhœa. If, in stricture, we purge, we keep up irritation in parts closely adjacent to, and strongly sympathising with, the diseased urethra; we induce those contractions of the abdominal muscles, and consequently that congestion in the tributaries of the internal iliac veins, which we are most anxious to avoid. But if, on the other hand, we simply unload the intestinal canal, particularly the colon and rectum, of all fæcal accumulation, and keep them free, we at once relieve those veins from mechanical pressure, and promote the secretions. If the case be a sufficiently severe one, the recumbent posture, and local depletion by leeches, are likewise commendable, as facilitating the relief of the urethra from a state of hyperæmia.

But, besides reducing the urine to a healthy condition, whether by attending to the stomach and its ingesta, or to the secretions of the skin, liver, and intestinal canal, we may exert a power over stricture by influencing the properties of this fluid still further, viz., 1st, by medication; 2dly, by dilution.

It may be matter of question, whether, as the chemical reaction of the urine when most healthy is acid, it would be rendered less stimulating to the parts with which it comes in contact by such administration of alkaline medicines as should render it neutral. I have already quoted the authority of Brodie in evidence that urine of actually alkaline reaction is unnaturally irritating to the urethra, but this point might easily be stopped short of. Be this, however, as it may, at least acidity in excess, or alkalinity of the excretion, imperatively demand the exhibition of the appropriate medicines to alter these conditions respectively.

Bearing in mind the beneficially soothing effects of copaiba both in gonorrhœa and hæmorrhoidal affections, I believe that if fairly tested in the complaint now under notice, it would prove highly serviceable. Nor should the surgeon overlook the salutary results of the moderate use of gin in stricture cases, but avail himself of them. I assume its efficacy as unquestionable, since it is established by the concurrent testimony of most patients; and they are, commonly, no heedless observers of the phenomena of their own disease. Its usefulness may be ascribed either to its imparting some medicinal virtues to the urine, or to its augmenting the secretion of the kidney; and this brings me to speak, secondly, of dilution of the urine as a remedial means.

2dly, Dilution of the urine manifestly, if a remedy at all for permanent stricture, is one which must be resorted to with great caution, and careful watching of its effects; since it would, *primâ facie*, seem indefensible to cause a man, who has already the utmost difficulty in passing his urine, to secrete double or treble his usual quantity. Yet there are very sound reasons for asserting that this plan is not only justifiable and scientific in principle, but in practice good. If there be truth in the position,—that to the acrimonious quality of the urine is, in a great degree, attributable the prolonged existence and intractability of permanent stricture, (since the irritation induced thereby at the part diseased is both directly injurious by maintaining morbid action, and indirectly by giving occasion to spasms at the seat of stricture, then straining to overcome the obstruction and expel the urine, and then congestion of the urethra in consequence),—if this argument be valid, then to dilute the secretion must be to expedite the cure. Of course the utmost circumspection should be exercised in the choice of the means we employ to act upon the kidney, as well as vigilance in marking the results of the change upon the individual patient; and previously to resorting to the milder diuretics, and the free use of mucilaginous beverages and slops, we must not forget those essential items of treatment before enjoined, viz. regulation of the functions of other organs, and maintenance of the general health. The measure, if thus judiciously had recourse to, holds out reasonable hope of making less continually necessary the use of the sound and bougie, and reducing these instruments from the nearly exclusive estimation in which they are at present held, to be regarded as but portions (however important ones) of an extended system.

In addition to what has already been advanced in favour of this plan, some further evidence remains to be adduced in its support. Thus, I may mention the popular belief in the efficacy of gin, to which allusion has been made. The report, whenever a patient has made trial of it in moderation, invariably is, that it has facilitated the urinary flow; and I give full credence to such statements as to facts easily explicable: for gin, taken by patients with this intention as a medicine, and not for the purpose of intoxication, is probably in quantity insufficient to disorder the actions of the stomach, or the kidney; it does but augment the secretion of the latter, and affords us an unequivocal example of increased urinary secretion, occurring simultaneously with relief of the disease. Again, to turn to routine practice in a complaint presenting,

in some features, analogy with that under discussion, who will deny the excellent effects of the diuretic treatment of acute gonorrhœa? Yet in this case, as in stricture, the nature of the malady is such, that every act of micturition is contemplated by the patient with dread, and as tolerable only because inevitable. Nevertheless, we systematically exhibit diuretics, while we strictly enjoin frequent and copious draughts of diluent fluids; and we pursue this course no less habitually than successfully.

Various objections may be urged in opposition to similar treatment of permanent stricture: among the first would be—that more duty would be thrown on a part which it is desirable to keep as much as possible at rest. In reply to this, it is to be observed, that quiescence of the urethra being (as before contended) identical with its freedom from irritation and congestion—though truly the canal may be more frequently used if diuresis be promoted—yet it is, at the same time, protected against these causes of injury,—the urine acting no longer directly as a source of irritation, nor indirectly as a cause of congestion. If, again, it be said,—that suffering must be augmented, an act productive of pain being more frequently repeated,—it should not be forgotten that precisely the same argument may be applied to the treatment of gonorrhœa on similar principles; but fortunately we have in the latter disease such proof of the fallacy of this reasoning as may well lead us to more than suspect its unsoundness in stricture.

In conclusion, briefly to recapitulate the plan of medical treatment recommended in concert with, and in support of, necessary mechanical appliances. It consists in the exhibition of—

1st, Those remedies which, by promoting the general health, and allaying excitability of system, diminish the irritability of the urethra.

2dly, Those which, by removing pressure on the pelvic viscera, obviate congestion of the same organ.

3dly, Those which, assisting the healthy functions of the chylopoietic viscera especially, prevent the elimination of an undue quantity of saline matters by the kidneys. And,

4thly, Those which, by augmenting the amount of fluid, lessen the proportion of saline constituents, and consequently the irritant property of the urine.

It is needless to particularise the means of fulfilling the above indications; let but the general principles be recognised, be borne in mind, and be closely followed out in practice, according to the exigencies of individual cases, and they will be found auxiliary in no small degree to the success of the mechanical implements, with which, it were too much to hope, we shall ever, in this disease, be able completely to dispense.

Cadogan Place, Belgrave Square,
January, 1844.

ON THE

STATISTICS OF FEVER IN ST. THOMAS'S HOSPITAL;

WITH REFERENCE TO TREATMENT.

By H. Burton, M.D.

(For the London Medical Gazette.)

[Continued from page 510.]

Age on the duration of fever.—1stly, in recoveries. 2dly, in fatal cases.

The results enumerated on Table VI. lead to the conclusion that young persons at and under 20 years of age are more susceptible of fever, but less prone to die under its agency, than others at an advanced age; and so far as my experience serves, the greater immunity of youth, as regards fatal fevers, is also observed, but in a limited degree, in respect of the protracted forms of the disease in recoveries, and the young appear to regain their health sooner than the more aged, according to the results enumerated on the following table.

TABLE XII.

70 cases of Spotted Fever.	21 cases between 4 and 15, average 12 years.	42 cases between 16 and 45, average 25 years.	7 cases between 46 and 53, average 48 years.	Difference between results in cases aged	
				12 and 25 years.	25 and 48 years.
Average day of fever on admission	8	11	11	3	0
Average day of return to a meat diet after admission.	13	15	17	2	2
Average duration of the fever in days from its commencement.	21	26	28	5	2

But although it is consistent with a pathological knowledge of the organic lesions which occur in advanced life, to find the period of convalescence in fever is protracted by age, yet the influence of age on its duration in recoveries is limited and subordinate to that of the day of fever, among patients of the two first periods of life represented on the above table, under 45 years of age; for if cases are selected which were admitted on the same average day of the fever, their duration will be seen to vary in a very trifling degree, and to be rather in favour of advanced life; but after 45, and under 64 years of age, this agent assumes a preponderating influence, as far as may be inferred from the results in a limited number of cases, over the day of fever. Thus:

TABLE XIII.

40 Cases.	16 cases between the ages of 4 and 15 years.	16 cases between the ages of 16 and 45 years.	8 cases between the ages of 46 and 64 years.	Differences between	
				15 and 45 years.	45 and 64 years.
Average day of fever on admission	$8\frac{1}{8}$	$8\frac{1}{8}$	$8\frac{3}{8}$	0	$\frac{2}{8}$
Average day of return to a meat diet	$14\frac{1}{8}$	$13\frac{3}{4}$	16	$\frac{3}{8}$	$2\frac{1}{4}$
Average duration in days of the fever from its commencement	$22\frac{1}{4}$	$21\frac{7}{8}$	$24\frac{3}{8}$	$\frac{3}{8}$	$2\frac{1}{2}$

In recording, therefore, statistical data relative to the duration of continued fever and the age of the patient, it is desirable to state also at what period of the fever he was admitted, with the view of correcting the result of treatment for these two modifying agents.

2dly. Age on the duration of fatal cases.

The influence of age, which has been shewn to be limited over the duration of fever in recoveries, is still less obvious over that of fatal fevers, and when viewed in relation to the nature of the organic lesion it appears to be of very secondary importance.

This conclusion is partly confirmed by the results of 198 fatal fevers enumerated in the following table.

Among the 24 patients who died at St. Thomas's there were 8 between the ages of 46 and 70 years, whose average

TABLE XIV.

Localities and authorities.	Periods of fever on admission.	Variety of Fever.	Cases.	Age.	Average duration to day of death.
St. Thomas's Hospital, Dr. Burton	Average day 10th	Mixed, chiefly cerebral and thoracic	24	35	18.
		Cerebral	16	35	12.
London Fever Hospital, Dr. S. Smith	First week	Cerebral and thoracic	19	23	18.5.
	Second week	Chiefly mixed	19	23	29.
	Third week	Abdominal	12	24	22.
	Second week	Abdominal	13	25	30.
	Third week				
Royal Infirmary, Edinburgh, Dr. Reid	Unknown	Mixed, chiefly cerebral and thoracic	43	35	12.5.
L'Hôpital de la Charité, M. Louis	Unknown	Abdominal chiefly	52	23	26.

age was 55 years; they were admitted on the 10th day of their fevers, and died on the 18th day, or at the same period of the disease as the total number of 24 patients admitted on the corresponding day at the age of 35 years: hence, among my patients, a difference of 20 years of age, *cæteris paribus*, made no obvious alteration in the length of time the patients survived. Again, 19 patients, aged 23 years, who had fever complicated with cerebral disease, according to Dr. S. Smith, lived only $18\frac{1}{2}$ days; whereas 52 patients, also

aged 23 years, but who had fever with abdominal lesions, lived, under the superintendence of M. Louis, 26 days; and it may be observed, also, on Table XIV., that the minimum duration of the series of fevers termed cerebral was shorter than the maximum duration of the series of fevers complicated with abdominal disease, by as many as 18 days.

On the supposition that fevers complicated with severe cerebral and thoracic disease prove more speedily fatal than other varieties with abdominal disease, and that, *cæteris paribus*, each variety terminates at a period respectively pathognomonic, I was led to compare the periods of their fevers at which my patients either died or recovered.

But the impossibility of comparing cases of fever precisely similar, some of which terminate in health and others in death, forbids any definite conclusion being drawn from the results of the comparison.

It is, however, remarkable that the average duration of the 24 fatal cases enumerated in Table XIV., was almost precisely equal to that of 229 cases which terminated in recovery, after deducting four days for the interval between the cessation of the fever and the period of return to a meat diet, as representing the therapeutic in contradistinction to the pathognomonic duration of the fever.

But this accordance is not so manifest when a comparison is instituted between the duration respectively of the fatal cases and recoveries for the corresponding weeks, as exhibited in the following arrangement:—

TABLE XV.

St. Thomas's Hospital.				Differences between therapeutic duration of fever in recoveries, and in fatal cases.	Differences between pathognomonic duration of fever in recoveries, and in fatal cases, after deducting four days from therapeutic duration.
Periods of fever on Admission.	Terminations.	Cases.	Average duration in days.		
First week	Recoveries .	110	20·2	7·2	3·2
	Deaths . .	9	13·		
Second week	Recoveries .	119	24·8	4·8	0·8
	Deaths . .	9	20·		
All periods	Recoveries .	229	22·6	4·6	0·6
	Deaths . .	24	18·0		

The near accordance of the terminations of the two series of fatal fevers and recoveries admitted respectively in the second week, and at all periods of the disease, leads to the inference that many more of the fevers enumerated among the 110 recoveries, and which were admitted in the first week of fever, were complicated with abdominal lesions than could be ascertained by the symptoms observed during life, and by the existence of which their convalescence was protracted beyond the duration of the nine fatal cases which were characterised chiefly by cerebral and thoracic symptoms previous to death. And it would be an interesting point, with reference to the pathology of fever, and also useful in relation to prognosis, to determine whether fevers, strictly cerebral from their commencement, of an adynamic character, do not invariably terminate either in death or recovery during the second week of their course.

Duration in reference to the epidemic prevalence of fever.—In evidence of the milder character of the fevers admitted on the decline of the epidemic, and on its supposed cessation, it will be seen on the following table that convalescence was established in 29 of the 144 fevers during the first week after their admission; whereas during the epidemic fever no patients returned to a meat diet during the first, and only 34 in the second week of their respective fevers; in fact, all the numbers represented in the last column under the head of "differences," afford similar proofs: it will be seen, also, that an amelioration began to take place during the first part of 1838; and the first column of "differences" between the returns of 1837 and 1838 will give a comparative notion of its amount.

TABLE XVI.

Periods from the commencement of fever at which 251 patients returned to a meat diet.	Number of Weekly Returns.					
	1837.	1838.	Weekly Differences for Two Years.	Total in 1837 and 1838 to June 24th.	Total, after June 1838, of Subsequent Years.	Weekly Differences for Six Years.
First week . .	None	None	None	None	29	29
Second week . .	12	22	10	34	81	47
Third week . .	27	29	2	56	27	29
Fourth week . .	13	4	9	17	7	10
Annual totals .	52	55	3	107	144	37

But although the average duration of the epidemic fever in 1837, after admission into hospital, is shown to have been more protracted than it was after June 1838, when fever was much less prevalent, yet the annual average mortality, with one exception, on Table I. among my patients was less. Hence the duration of fever which terminates in recovery, and the mortality from it of the same years, do not increase in the same ratio: and their difference points out the necessity of taking the epidemic constitution of the atmosphere into calculation when estimating the effects of treatment in recoveries from fever as well as in fatal cases.

It is probable the epidemic constitution of the air not only determines the virulence with which the febrile poison acts on the blood, but also the direction to particular organs on which its chief power is exerted. But the variable lesions which have been developed in connection with fatal fevers, at post-mortem examinations, during different epidemics, and by the nature of which their duration has been shewn to be modified, are not so unequivocally detected during life by symptoms, and consequently, in the cases which recover, it is often impossible to pronounce an opinion, with any justifiable confidence, as to the precise nature of the organic lesion in them, by which their duration was respectively modified, although all were treated under conditions apparently similar: hence it is to be feared that no numerical calculation will afford much useful information to the practical physician in single cases. Nevertheless, in a series of many cases the results of treatment under similar conditions are so remarkably uniform that a knowledge of them will probably assist in making a correct prognosis as regards the duration of fever, and also serve to check any hasty conclusion in favour or condemnation of particular plans of treatment.

To the difficulty of discriminating between the several varieties of adynamic fever, which bear a near resemblance to one another, many of the discrepancies as to their duration in recoveries may be perhaps ascribed; but when similar, or nearly similar cases, are compared, all will, I think, be found to continue nearly the same average period, to the commencement of convalescence. In this expectation an attempt has been made to exhibit, on the following table, the results observed in 229 fevers which terminated in recovery under my superintendence at different periods during the last six years, in relation to the modifying causes which have been already separately noticed in this communication; and I believe the data which furnished them have been accurately calculated.—See next page.

The influence of the four quarterly seasons on the duration of fevers which recovered is not obvious on the above table, irrespective of the epidemic constitution of the atmosphere; but it will be observed that the fevers of the years 1837 and 1838, when epidemic, were, with two exceptions, more protracted from their commencement than those of the subsequent years, and in one instance by as many as three days among the males, and in the other their duration was nearly equal. Again, among the female patients the only exception occurred in the second week of the fourth quarter, when, according to my notes, the fevers admitted in the second weeks of the years subsequent to the epidemic were characterised by

TABLE XVII.

PERIODS WHEN ADMITTED.			CASES.		AGES.		Average duration of fever after admission in days.		Average duration of fever from its commencement in days.		Number of cases in relation to the weeks in which the fever terminated after admission.								Number of cases in relation to the weeks in which the fever terminated from its commencement.							
											MALES.				FEMALES.				MALES.				FEMALES.			
Years.	Seasons.	Weeks of Fever.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	1st.	2d.	3d.	Over.	1st.	2d.	3d.	Over.	2d.	3d.	4th.	Over.	2d.	3d.	4th.	Over.
1837, to June 1838 . .	First quarters .	First weeks .	5	6	21	19	14·4	15	20·2	20·5	0	3	2	0	0	3	2	1	0	3	2	0	0	3	3	0
June 1838, to July 1843 .			11	7	22	14	11·7	14	17.3	19·7	2	8	1	0	1	4	2	0	5	5	1	0	2	3	2	0
1837, to June 1838 . .		Second weeks	11	8	19	23	15	11	25·3	22·2	1	7	2	1	2	5	1	0	0	1	9	1	0	5	3	0
June 1838, to July 1843 .			2	7	32	24	12	12	23	23	0	2	0	0	2	3	2	0	0	0	2	0	0	4	1	2
1837, to June 1838 . .	Second quarters .	First weeks .	10	5	25	19	14·6	15·6	20·7	21·2	1	4	3	2	0	3	2	0	1	5	3	1	0	2	3	0
June 1838, to July 1843 .			13	6	21	19	15	14	20·8	20·3	2	5	3	3	0	4	2	0	2	5	4	2	0	5	1	0
1837, to June 1838 . .		Second weeks	13	9	18	22	15·9	12·3	26·8	22·8	0	6	6	1	2	6	1	0	0	2	9	2	0	3	5	1
June 1838, to July 1843 .			10	12	27	27	13·6	12	24 1	20·5	1	5	3	1	2	8	1	1	0	3	4	3	0	6	6	0
1837, to June 1838 . .	Third quarters .	First weeks .	5	0	18	0	14·2	0	21	0	0	4	1	0	0	0	0	0	0	4	1	0	0	0	0	0
June 1838, to July 1843 .			7	10	20	20	11·5	15	17·4	21	2	3	2	0	2	3	5	0	2	3	2	0	2	2	6	0
1837, to June 1838 . .		Second weeks	4	0	0	0	12	0	23·7	0·	1	2	1	0	0	0	0	0	0	2	1	1	0	0	0	0
June 1838, to July 1843 .			10	6	25	23	14·6	14	26·9	24·6	1	7	1	1	1	4	1	0	0	2	6	2	0	3	2	1
1837, to June 1838 . .	Fourth quarters .	First weeks .	9	7	18	21	15·2	16	21·3	22·5	1	4	3	1	0	3	4	0	1	5	2	1	0	3	4	0
June 1838, to July 1843 .			5	4	21	25	15·6	13·7	19·8	20·2	1	2	2	0	1	1	1	1	1	3	1	0	1	1	1	1
1837, to June 1838 . .		Second weeks	6	8	16	27	15·3	15·4	27·1	26·2	0	4	1	1	2	1	5	0	0	1	4	1	0	2	2	4
June 1838, to July 1843 .			8	5	27	18	12·6	21·4	25·5	32·8	1	6	1	0	0	2	1	2	0	2	4	2	0	0	2	3
Total first weeks			65	45	21	22	14	14·8	19·8	20·8	9	33	17	6	4	21	18	2	12	33	16	4	5	19	20	1
Total second weeks			64	55	23	19	14	13·5	25·8	23·8	5	39	15	5	11	29	18	3	0	13	39	12	0	23	21	11
Whole period			129	100	23	25	14	14	22·7	22·5	14	72	32	11	15	50	30	5	12	46	55	16	5	42	41	12

great prostration and unequivocal symptoms of pulmonary and abdominal disease.

It is hardly requisite, after the remarks which have been made, to enter upon any further explanation of the individual results enumerated in the above comprehensive synopsis; but as they are numerous, and the relations existing between them intimate, I will venture to impose an additional tax on the reader's patience for the purpose of directing his attention to a few which appear to be least manifest. In the first place he will have the goodness to observe that the influence of sex for corresponding periods over its duration from the commencement appears likewise to have been controlled by a more powerful agency, and although in some instances the females recovered a few days earlier, yet in others their recovery was more protracted than that of the males; and for the whole period the average therapeutic duration of fever in the two sexes respectively differed only 2-10ths of a day, among 229 patients, from its commencement; but the fevers in the females admitted in the first weeks were more protracted by one day than those in the males for the corresponding weeks. No influence can be traced to age within the average periods of life enumerated on the table.

Some opinion may be formed of the relative severity of the fevers admitted at different periods by comparing the number of cases in each week with the weeks in which the fever terminated in the two sexes respectively, and the comparison will shew that a large majority of patients returned to a meat diet in the third and fourth weeks from the commencement of their fevers.

The fevers admitted in the first weeks of their course, and which terminated during the first week after admission, were very few, and also mild; whilst those admitted in the second week, and which also terminated in the first week after their admission, were, for the most part, nearly convalescent, and not seriously complicated, whereas those fevers which were protracted over the fourth week from their commencement were severe, and complicated with either abdominal or thoracic lesions. The remaining majority I consider were, for the most part, characterized by cerebral symptoms, and by a uniformity as to the periods at which they terminated.

There is no obvious reason for doubting the probability of this uniformity being invariable in similar varieties of fever; and it may perhaps be received by pathologists as corroborative evidence of the nature of the particular kind of fever which prevails at different periods in various localities. This opinion has been rendered probable by the uniform average duration of fatal fevers, and is strengthened by a comparison of the results observed in 14 cases of recovery at St. Thomas's, with 14 analogous cases which are very minutely described by Mr. J. H. Browne, in the valuable Reports of Guy's Hospital for April 1843, pp. 331, &c. and which were admitted during corresponding months of the year, and days of fever nearly, into that institution. Thus—

TABLE XVIII.

Winter months.	Number of cases.	Average day of fever when admitted.	Average day of return to a meat diet after admission.	Therapeutic duration of fever from its commencement.	Time in Hospital.
St. Thomas's .	14	$12\frac{5}{14}$	15	$27\frac{5}{14}$	$32\frac{4}{27}$
Guy's Hospital	14	$12\frac{3}{7}$	$17\frac{6}{7}$	$29\frac{2}{7}$	$32\frac{3}{7}$

It appears probable, from an inspection of the results of treatment enumerated on the foregoing tables, with reference to the circumstances which have been shown to modify the duration of fever, that a series of cases, limited in number, will furnish as much useful information as regards prognosis in single cases as a more numerous series. But it should be understood that the results contemplated were obtained by different kinds of treatment, and as they may have been modified by each, I propose, at a future period, to inquire into the comparative efficacy of the particular plans which were pursued.

CONTRIBUTIONS

TO

ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.

Lecturer on Anatomy and Physiology, and Corresponding Member of the French Academy of Medicine.

[Continued from p. 578.]

On the Corpus Luteum.

Opinions of scientific observers.

1. *Baer.*—The corpus luteum is formed by a thickening of the inner membrane of the ovarian vesicle (vesicle of De Graaf). It is not a new body, but merely the inner coat in a greater degree of developement.

2. *Montgomery.*—The corpus luteum is formed between the coats of the ovarian vesicle (vesicle of De Graaf), its substance being pervaded by the small vessels passing from the inner to the outer coat.

3. *Lee.*—The corpus luteum is neither produced by a thickening of the inner layer of the ovarian vesicle (of De Graaf), nor is it a deposit of new substance between its tunics, but it is placed outside both tunics of the ovarian vesicle, and having the stroma of the ovary in immediate contact with it.

The dissection in our own case, recorded in the first part of these Contributions, induces us to think that it is the outer tunic of the Graafian vesicle, and particularly the inner surface of that tunic, which ultimately assumes the thickness and complicated appearance as seen on a section being made of the body.

Table of measurements in 17 cases *(to all appearance authentic,)* of the so-named corpus luteum, after impregnation, from the 5th to the 280th day.

1. Day after supposed impregnation had taken place.
2. Names of those who have recorded the case.
3. Longest axis of the bisected corpus luteum.
4. Shortest axis of ditto.
5. Thickness of the glandular structure.
6. Central cavity.

1	2	3	4	5	6
Day.		Lines.	Lines.	Lines.	Lines.
5th	Home . . .	9	6	1 1/2	
8th	Home ? . .	9	6	1 1/2	
46	Lee	9	7 1/2	1 1/2	6
62	Lee	6	3 1/2	1	3
62	Clark . . .	9 1/2	8	3	
70	Montgomery .	7	6		
93	Montgomery .	7 1/2	6 1/2	2 1/2	3
108	Keever . . .	9	7	2	4 1/2 by 2 1/2
108	Knox . . .	7	6		
155	Hunter, W. .	8 1/2	7		4 1/2 by 1 1/2
186	Roederer . .	6	5	3	2
186	Montgomery .	6	5	3	2
186	Home . . .	7 1/2	4 1/2	1	4
201	Lee	6	4 1/2	1	3
280	Roederer . .	7	4		
280	Montgomery .	6	5		
289	Hunter, W. .	6	5		
285	Knox . . .	4	2 1/2	1 1/2	1 1/2

From this table it will be observed, that there exist great differences in repect to the size of the body at different periods of gestation. The largest recorded is that by Dr. Clark at the 62d day; the smallest by Dr. Lee at the 62d day! This is puzzling, inasmuch as it occurs in cases selected for their undoubted authenticity, and the accurate and truly scientific manner in which the cases have been presented to the public: it is doubly so, when we reflect on the fact, already mentioned, that perhaps no two persons will agree in opinion with regard to a section of the human ovarium. Whether the person may have had children or not? whether the bodies displayed by the section are, or are not, the effect of impregnation?

That Sir E. Home was so fortunate as to record perhaps the earliest case after impregnation in the human subject, no one seems inclined to deny. The history of the case is given in detail, and every thing which can render it authentic and satisfactory to the scientific mind has been recorded by Sir Everard, in his great work on Comparative Anatomy.* He seems to us to have done the case the greatest justice, not only in the method of his dissection, but in the manner in which he has recorded its various stages. The drawing and engravings are beyond all praise.

In brief, no more satisfactory case has since been given to the public; a surprising fact, when we reflect how

* The reader will be pleased to observe that it is my brother alone who writes this. I do not partake of his opinions.

easy it is to follow in the wake of a great discoverer, and how extremely numerous the fry have been who have followed in the wake of Sir Everard Home! Were it not attended with great expense, the friends of Sir Everard should still publish the case, with the engraving, as a separate monograph, for we repeat that we ourselves have witnessed one of the most accurate anatomists mistake the plates referring to the virgin case, for those of the servant-maid's case, and thus embroil his ideas to such an extent as to induce him to look upon the description as a downright imposture.

We have said that Sir Everard Home, in his lectures, refers to the plates in so superficial a manner, and even in most cases erroneously, that we shall be at the pains to give them here in detail; a mode of examination which we strongly suspect many of the small fry who have followed have adopted, not with the view of elucidating truth, but of ascertaining to what extent they could pilfer and appropriate.

Case.—"A servant-maid, æt. 21, on or about the 7th January, 1817, became pregnant, and died epileptic on the 15th; that is to say, 7 or 8 days after becoming pregnant. On dissection the uterus was found enlarged, and the whole, with its appendages, were put in alcohol for future careful examination. On the right ovarium, and on the most prominent part of its external surface, is a small ragged orifice, a longitudinal incision made close to the orifice, when a canal was found leading to a cavity filled with coagulated blood, surrounded by a narrow yellow margin, in the structure of which the lines had a zigzag appearance. Upon examining the cavity in this ovarium, it had an oval form, it contained a coagulum of blood, and was surrounded by a yellow margin similar to that which surrounds the corpus lutum."—Lecture on Generation, p. 289, 294.

The plates given by Sir Everard Home, illustrative of this case, are the following:—

Plate 102.—Uterus and its appendages.

Plate 103. — Right impregnated ovarium; section of.

Plate 104. — Left unimpregnated ovarium; section of.

Plate 105.—The ovum itself.

Plate 102.—*Uterus and its appendages.* Nothing can exceed the beauty and perfection of this drawing and engraving; the dissection was judicious, and the only thing wanting was a little letter-press description; that added to the plate itself is worse than ridiculous. "The uterus laid open from behind, to shew the human ovum in the situation in which it was discovered." The objects are not magnified, the ovum being scarcely a line in its greatest diameter, and so much resembling the surrounding structures, that no one, we are satisfied, will observe it without a direct reference. The minute body so imperfectly alluded to by Sir Everard in his Lectures, may, however, be observed with ease on the surface of the inner membrane of the uterus, about 1 inch 7 lines from the os uteri, the neck of the uterus being entirely plugged up by a mass of a peculiar albuminous substance (always present in all cases of impregnation), rendered more solid no doubt by immersion in alcohol. We are the more particular about this albuminous substance, inasmuch as we have seen it actually supposed to be the ovum alluded to by Sir Everard! The right ovarium measures 1 inch 6 lines at its fixed margin, and 6 lines deep where the mammillary shaped projection is beautifully represented, indicative of the presence or recent escape of a fruitful ovum, and consequently the presence of a corpus luteum.

This plate gives a view of the uterus opened from behind; and the right ovarium presents precisely the appearance indicating the presence of a *corpus luteum;* it has lost its compressed oval shape, having prominences towards its proximal pole.

Plate 103 gives a view of the section, evidently greatly magnified, though not stated to be so, of the right impregnated ovarium; it measures 3 inches in length, with a breadth (each segment) of 1 inch 4 lines. There are no letters of reference, and the cut surface presents a very complex mottled appearance; numerous cysts have been cut across, and of course blood-vessels: near the proximal pole, and in the situation of the swelling indicating the situation of the corpus luteum in the entire ovary, as seen in plate 102, a large irregularly shaped body, represented as having been bisected; and on the left segment I observe a dark line indicating the canal alluded to by Sir Everard Home.

The central cavity in the meantime is indistinctly shewn, and the yellow circumference with its plicæ is really not represented at all. Near the distal pole of the ovary the knife has bisected a body presenting all the appearance of a corpus luteum at the third or fourth month of pregnancy.

That the ovary was an impregnated one, and had given off an ovum, I think the very drawing proves beyond a doubt. The case is about as authentic a one as could be wished for, and it is only to be regretted that a more carefully detailed description of the engraving of the section, as seen in plate 103, had not been given to the public. I have already remarked that the section presents the appearance of another corpus luteum.

The appearance of this second corpus luteum would at the present day be declared to be that of the corpus luteum at the full period of gestation, and indicating that the young woman had had a child previously; always taking it for granted that Sir Everard was correct in identifying the recently impregnated Graafian vesicle, and of which, we think, the engravings leave no doubt.

These are all the plates given by Sir Everard Home, as connected with this extremely interesting case, and they appear to us perfectly satisfactory. They prove nothing more, however, (but they completely prove *that*), than 1st. That an ovarian vesicle had been impregnated. 2d. That an ovum had left the ovarium, and was found in the uterus on the 7th or 8th day after impregnation. 3d. That the ovarian vesicle after impregnation takes on a high degree of vascularity, gets greatly enlarged and distended, and ultimately gives rise to the appearance *(unfortunately called)* corpus luteum. 4th. That the minute body found in the uterus was the ovule there can be no reasonable ground for doubt, and that the dissection and description given of it are *good* for the period at which they were made. We repeat that little or nothing more has been done in human anatomy on this subject.

We now proceed to examine the other cases alluded to by Sir Everard Home in his Lectures; and this is by no means so agreeable a task. Our inquiry, however, leads directly to a most important question: viz., What were Mr. J. Hunter's opinions on the subject of the human corpus luteum?

The plates given by Sir Everard Home illustrative of the corpus luteum in the human ovaria, which he admits were taken from J. Hunter's museum, are plates 108, 109, 110, 111.

Plate 108 is a view of a fœtus found in the ovarium after the person's death, and although the drawing and engraving are exquisitely beautiful, yet the appearance of the ovarium and corpus luteum are by no means satisfactory. DD are said to point to "portions of the ruptured corpus luteum," but these look like nothing we have ever seen of that body.

Plate 109 gives three views of the human ovarium externally, and their section: fig. 1 and 2, "view of the human ovarium that did not contain the ovum from which the child was produced. It contained a corpus luteum *nearly the full size!*"

We remark on these figures, particularly the section fig. 2, that these are distinctly delineated true corpora lutea, one nearly obliterated, the other six lines in its longest diameter, with a distinct central cavity and altogether strictly resembling a fruitful corpus luteum towards the latter period of pregnancy, remaining from some unknown cause larger than usual, apparent and distinct. Thus we should have been inclined to have stated the very reverse of Sir Everard Home, viz. that the ovarium was that from which the child had been produced, and we should have felt the more confirmed in this opinion from an examination of the other ovarium (same plate, 109, fig. 3 and 4), whose section (fig. 4) presents the appearance of numerous Graafian vesicles cut across, condensed white irregular spots, supposed by Sir Everard to have been the fruitful corpus luteum! and one very small, but well-marked, considered by Sir Everard to be a new corpus luteum forming.

We can gather from the engravings and letterpress that these ovaria were from a case in the Hunterian collection of a woman who had died immediately after the child was born, consequently at the 9th month of pregnancy, and we feel satisfied that our views will be borne out by all practical men, viz. that fig. 1 and 2 mark the fruitful ovarium, instead of 3 and 4, as supposed by Sir Everard: the preparations

it is admitted existed in the Hunterian museum, and in all probability the sections were made by J. Hunter himself. We are by no means certain, however, that the description of the figures is either correctly given, or is that of Mr. Hunter. It is evident that the section had been made after the immersion of the preparation in alcohol, and consequently may have been made by Sir Everard himself, in which case he has evidently mistaken the unfruitful for the fruitful ovarium.

Fig. 5 and 6 (plate 109,) are external view and section of an ovarium of a woman, aged 70, "*to shew how little of the appearance of corpora lutea remains.*"

We remark, that our wonder is that there should be any remains of corpora lutea at the age of 70. The appearances delineated certainly do look like the remains of corpora lutea; but Sir Everard has not, apparently, observed that the view is an enormously magnified one. The large hydatid alluded to by Sir Everard would in the present day be considered a Graafian vesicle, and altogether the history of the ovarium would require undoubted authenticity as being that of a person aged 70.

Plate 110 contains five figures: 1 and 2 are either copies of Sir Everard Home's case of the "servant girl," already delineated in plates 102 and 103, or they are not. Now we do think, and indeed feel quite assured, that these figures are a repetition of the *right* impregnated ovarium from the servant maid's case; but that case (and which we consider authentic, most interesting, and satisfactory, and altogether Sir Everard Home's own case) is stated by our author to be one at the seventh or eighth day after impregnation, whilst the figures in the plate, which we consider copies of each other, are stated to belong to a case at the fifth day. If they are not copies, but refer to preparations in Mr. J. Hunter's museum (we mean the museum left by Hunter at his death), then it is clear that Mr. J. Hunter had met with some very early case of impregnation in the human subject: and this impression leads us still more deeply to deplore the destruction of the manuscripts left by Mr. Hunter, and burned by Sir Everard Home. It even throws doubts on the case of the servant maid, recorded by Sir Everard Home; for he may have applied the opinion of Hunter to the case of the servant maid. They are merely alluded to in the letter-press to the plates as the human ovarium *five days* after impregnation.

Figs. 3 and 4 of plate 110 shew the human ovaria six weeks after impregnation; and fig. 5 is a transverse section of the same ovarium.

We remark here that figs. 3 and 4 are most interesting figures, and go greatly to destroy the theory of Sir Everard himself. The view of the corpus luteum, which has been eight lines in its longest diameter, is most magnificent, satisfactory, and precisely such as we would have supposed to indicate a period of six weeks' gestation. It will be found, by referring to the table (page 605), that the measurements come as near as possible to those given by Rœderer and Montgomery. The Graafian vesicles cut across are numerous, and we also observe some remains of former corpora lutea. If the details of this case had been given by Sir Everard, we feel assured that they would have been perfectly accordant with the present received opinions regarding the appearance of a fruitful impregnation at the sixth week. The corpus luteum, properly so called, is seen to be assuming a more distinct outline and a specific character.

Plate 111 gives views of three ovaria, and is a most interesting plate. Figs. 1 and 2 are views "of ovarium and section in which no ovum was contained." There are, we observe, numerous Graafian vesicles, which have been cut across; and it also resembles so strongly the section of a virgin ovarium in our own museum, and the details of which we have given at the commencement of this part of the contribution, that the drawings might pass for it. There are no appearances of corpora lutea; and we therefore perfectly agree with Sir Everard that no ovum had come from it.

Figs. 3 and 4 "are views of the external aspect and section" from which the ovum escaped; and fig. 5 is a view of the ovum itself.

These five figures, which we have gathered with no little difficulty, refer to one case which we now copy from Sir Everard Home's lectures, page 304.

"In a young woman, æt. 20, with a perfect hymen, one of the ovaria was found to contain a corpus luteum, in which was an ovum arrived at its full size; the second covering or chorion already formed, by means of which the ovum had a slight adhesion to the inner surface of the cavity of the corpus luteum; so that if this woman had lived, and this ovum had been impregnated, it would have proved an ovarian case." (Lecture on Generation, p. 304.)

We do this the more readily, that we are aware that the illustrative views of this case have been, by many accurate observers, mixed up with that of the servant-maid's case; and assertions made, and errors attributed to Sir Everard, which he has neither made nor committed. The fault lies, in our opinion, with his assistants, in referring to the plates.

We shall return to the case when considering the ovule, and shall confine our observations to the appearance which the ovary and section (figs. 3 and 4) present. The ovarium itself measures one inch, five lines, in length, and only six lines at its greatest depth, presenting no appearance of the presence of a corpus luteum. Its section, magnified two diameters, exhibits great vascularity, two or three Graafian vesicles bisected, and near the centre a well-defined and undoubted corpus luteum; this, however, must have been extremely small, being only four lines (if not magnified) in its longest axis. The ovum is represented *in situ*, as contained in the right segments; and fig. 5 gives a magnificent view of the body, we presume, removed from its bed. We refrain from further comment by merely remarking that the corpus luteum is about the best delineated one we have seen, and, recollecting its extreme minuteness (only four lines in its greatest diameter), would indicate some previous fruitful pregnancy, notwithstanding the appearance of a hymen, and the existence of the minute hour-glass-shaped body which Sir Everard removed from its interior.

Abstract.—It is ever to be lamented that the MS. papers of J. Hunter were destroyed. The inexplicable nature of the figure to which we have alluded in a former page, raises a suspicion in the mind that some early case of impregnation had occurred to Hunter, of which the drawings and notes merely were left at the time of his lamented death. Whether the idea that corpora lutea are formed in the human virgin ovaria be Home's or Hunter's, we have found it impossible to make out; but the correct description given of the figure, and to which we have alluded, we feel inclined to consider altogether as a case of John Hunter's. It is admitted by Sir Everard that the preparation is in the Hunterian museum; and of course the leading or direct statement, that it was a corpus luteum at the sixth week, must have been made in some MS. catalogue. Were the corpus luteum the body "which secretes the ovule" preparatory to being capable even of impregnation, and which appears to have been Sir Everard Home's opinion, how is it that it increases so much in size after having not only performed its function in, as Sir Everard supposes, forming the ovule, but after that ovule has been impregnated, left the ovary, and sojourned in the uterus for a period of no less than six weeks? Sir Everard's virgin corpus luteum, as represented in the plates to his lectures, at plate 111, figs. 3 and 4. The corpus luteum is only about three lines in its longest diameter, one and a half in its short diameter; and he designates this as having arrived at its full size!

Now the corpus luteum, when seen soon after impregnation, measures three or four times the size of the above—a fact, indeed, recorded by himself in the sixth week case!

John Hunter's inquiries into this very subject—that is, the formation and true nature of the corpus luteum—were most extended, but of course these inquiries were made directly only on the lower animals. The very term of corpus luteum or glandulosum, is applicable only to the structure as observed in the lower animals. That these bodies are found in all stages in sheep and oxen, whether virgin or not, whether impregnated or not, we are quite certain; but even when the so-named corpus luteum is found in the human ovarium, and a fœtus in utero to guide us, the body bears little resemblance to the corpora lutea in the sheep, cow, pig, &c.

Confining our attention, therefore, solely to human structure, we are of opinion that the following queries require solution:—

1st. To what extent do the ovarian

vesicles (vesicles of Graaf) become developed in the human virgin?

2d. If developed beyond the mere elementary vesicle, so that the embryo may be demonstrated, will there be found any structure representing the yellow plicated tunic, at present considered the very test of impregnation?

3d. Does an ovum ever leave the human virgin ovarium?

Appendix.—Since the preceding remarks were arranged, the author has had an opportunity of examining the ovaria of a woman who had died on the fifth day after delivery at the full period of gestation. The patient died of puerperal fever. The ovaria, in this instance, presented a remarkably thin compressed appearance. The uterine tube, and its fimbriated extremity on the left side, appeared increased in size, and to have suffered from the inflammation in common with the uterus, the lymphatics of which contained pus. Upon a section being made of the ovarium—which was, upon the whole, of the usual size—a very distinct corpus luteum was found. We have given its dimensions in the table at page 605. Careful dissection of the characteristic portion of the body—that is, the yellow plicated structure—proved it, we think beyond a doubt, to be an organized texture resembling a gland. It was firm, and could have been readily turned out of its bed in the stroma of the ovarium. The central white line was very distinct, equalling a line and a half in length. The yellow plicated structure, there can be no doubt, is simply the outer layer of the Graafian vesicle.

Between the segments of this corpus luteum I observed a very distinct vesicle, which I examined with great care. It consisted of two tunics, and contained a thickish fluid. It will be seen opened up in the preparation.

I have opened up the uterine tubi, and the longitudinal folds are well displayed. The structure, more especially towards the fimbriated extremity, seemed distinctly muscular.

The above memoir, as I have already said, was drawn up by my brother in defence of Sir E. Home, *as an observer;* had he known as much of the two cliques supporting Sir Everard, viz. that of the Royal Society, and that in the body of the College, as I did, he would, I believe, have declined the defence.

[To be continued.]

CONTRIBUTIONS TO PATHOLOGY.

By John Percy, M.D. Edin.
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(For the London Medical Gazette.)

Analysis of Albuminous Liquids.

May the 15th, 1841, I received from my colleague, Mr. W. S. Cox, the liquid which he obtained by tapping a female labouring under ascites. I was present at the operation, which was performed at 6 p.m. May the 14th. The female was of middle age, and was probably affected with hepatic disease. I made two analyses. The liquid had a pale straw colour; and was slightly turbid, owing to suspended flocculent matter. Sp. gr. 1817·8. Temp. 64° Fah. It restored completely, yet slowly, the colour of reddened litmus paper. The evaporation was effected in the first analysis over the steam-bath, and in the second over sulphuric acid in vacuo.

1. 250 grains.

Water	238·0
Albumen	9·5
Indeterminate organic matter	0·8
Salts	1·9
	250·3

Error in drying ·3 in excess. The saline matter consisted principally of chloride of sodium. It contained also alkaline sulphate and carbonate. Neither phosphoric acid nor lime were detected. Part of the excess arises from the carbonic acid in combination with the alkaline base being estimated.

2. 300 grains.

Water	285·00
Albumen	10·24
Organic matter soluble in spirit	0·5
Ditto insoluble in spirit, but soluble in water	1·6
Salts	2·36
	299·70

Error of loss ·3. The residuum obtained by evaporation of 300 grains in vacuo for three days was 15·0 grs. That obtained by evaporation of 250 grains over steam-bath during three hours was 12·0, which would probably have suffered a little further reduction by a more prolonged evaporation, At 12h. 48m. the residuum weighed 12·1, and at 1h. 28m. when the operation was discontinued, 12·0. Accordingly, the difference of result between the two modes of evaporation, is a loss of 0·5 by evaporation over the steam-bath; for 300 : 15·0 :: 250 : 12·5.

In the first analysis we have 9·5 of albumen, and consequently we should from this have 11·4 in 300 grains of liquid. However, we have only 10·24. Difference 1·16.

This error is probably due to defect in washing. In the second analysis we have, on the contrary, an excess of indeterminate organic matter. If, from this excess (the whole amount being 2·1), we deduct the amount of deficiency in the albumen in the same analysis (1·16), we shall find that the error is clearly accounted for. The difference between the weights of saline matter in the two analyses is 0·08. For, 250· : 1·9 : 300 : 2·28 ;—2·36—2·28 = 0·08.

Calculating from the first analysis, we have in 1000 grains—

Water	952·0
Albumen	38.0
Indeterminate organic matter .	3.2
Salts	7.6
	1000·8
Error of excess . . .	0.8

I received from my friend, Dr. Wright, the liquid obtained by tapping a female affected with chronic peritonitis. The case has been published by Dr. Wright in the Lancet, Feb. 1842.

Characters of the liquid.—Colour reddish brown. Shortly after its evacuation, a considerable quantity of tremulous coagulum of a blood-red colour was spontaneously separated, after subsidence during the night. The coagulated matter (fibrin) contracted into a very small volume, and collected at the bottom of the vessel; while the supernatant liquor was transparent, and had the usual pale brown colour of serum. A portion of the liquid was filtered immediately after the operation, while yet warm, and coagulum was again formed in the filtered liquid. Sp. gr. 1020°. Temp. 62° Fah. I employed 750 grs. for analysis. The evaporation was conducted first in the ordinary steam-bath, and then in Berzelius' apparatus for drying at 212 Fah.

Analysis of 750 grains in the first column, and of 1000 in the second.

	1.	2.
Water	705.4	940·5
Albumen, with fibrin and red particles in minute quantity.	34·2	45·6
Matter extracted by water and dissipated by heat, lactic acid ?, trace of urea, &c.	1·9	2·5
Saline matter, consisting of chlorine, sulphuric, and phosphoric and carbonic acids* ; and of soda, lime, and magnesia	7·2	9·6
Loss	1·3	
	750·0	

* Derived by destruction of organic compound containing soda.

In searching for urea I employed 1½ pint, of the ascitic liquid. It was evaporated to dryness over the steam-bath. The residuum was well tirturated in a mortar, and then treated with rectified spirit. The spirituous solution was removed by squeezing through calico, and was afterwards filtered through paper. This solution was carefully evaporated over the steam-bath. A small quantity of liquid, of syrupy consistence, and of a light brown colour, remained: it restored the colour of reddened litmus. To a portion of this residuum I added a very small quantity of distilled water, and then a few drops of nitric acid. Some flocculent white matter was not dissolved by the water. The nitric acid precipitated small white flocculi, in which a crystalline form could not be detected. By the addition, however, of the acid, the same peculiar odour was evolved as when the residuum of common urine is treated by nitric acid in the process of obtaining nitrate of urea. I next added common rectified æther (which always contains a large proportion of alcohol). I stirred well, decanted the æthereal solution, and left it to evaporate at a very low temperature. On cooling, I obtained a mass of crystals, which, by the aid of the microscope, were found to be modified rhomboidal plates.

Pure nitrate of urea was dissolved in a small quantity of water, containing nitric acid, and then treated with the same æther, in the manner described above. Well defined crystals of nitrate of urea were formed by evaporation.

I dissolved the crystals obtained from the ascitic liquid in a small quantity of distilled water, and then neutralized with pure carbonate of baryta. The whole was evaporated to dryness at a gentle heat over the sand-bath. The dried mass was treated with cold alcohol of 804° : the alcoholic solution was filtered, and left to evaporate spontaneously during the night. On examination the following morning, crystals were observed at the edge of the syrupy liquid which remained. I then carefully evaporated this liquid on the sand-bath ; a quantity of white matter was left, which did not present at first any decided appearance of crystallization ; but on careful examination I still observed some well-defined rhomboidal plates. After a short time, however, the white matter having been exposed to the air, and having, probably, absorbed moisture, presented a distinct frosted appearance, occasioned by delicate needles in parallel bundles, variously placed in regard to each other. I have been thus minute, because I was not able by the use of alcohol in the usual manner to satisfy myself of the presence of urea. The rhomboidal plates which were observed after the treatment by carbonate of baryta were probably nitrate of urea which had escaped the

action of the carbonate of baryta. There was present some organic matter which prevented the separation of the nitrate of urea in a distinct crystalline form by the simple addition of nitric acid. Oxalic acid occasioned a flocculent precipitate in the evaporated æthereal solution. Dr. Wright found urea in the saliva in this case.

Liquid of Ovarian Dropsy.

I was favoured by my colleague, Mr. Knowles, with the liquid which he evacuated by paracentesis in a case of ovarian dropsy, October 1841. Characters :—turbid; colour brown; viscous; froths by shaking like a solution of soap Filters slowly and clear. Reaction alkaline, restoring completely, yet slowly, the colour of reddened litmus. Sp. gr. 1035·2. I operated upon 500 grains. The evaporation was effected first over the steam bath, and then in Berzelius's apparatus.

1000 grains contained

Water	885·4
Albumen	94·0
Organic matter, with alkaline chloride, and some alkaline carbonate	18.0
Alkaline ash from incineration of albumen	2·6
	1000·0

The dry residuum was washed, as usual, with boiling distilled water until the water ceased to be appreciably affected by nitrate of silver.

Liquid of Hydrocele.

Nov. 16th, 1841, I received from my friend, Mr. Mackay, the liquid of hydrocele, obtained by tapping from a youth of strumous habit. Characters :—It had a pale straw colour, and contained suspended innumerable small shining scales, of a pearly aspect. It had not a perceptible smell. The sp. gr. of the filtered liquid was 1024·5; temp. 57° Fah. It restored the colour of reddened litmus.

I filtered 1500 grains of liquid, and washed with cold distilled water what remained on the filter. By thus washing, I removed some serous liquid, and a minute quantity of red particles, which tinged the shining matter on the filter red. The red particles gradually subsided in the water. There now remained on the filter a mass of beautiful, colourless, shining, scales, of which, after careful drying over the sand-bath, I procured 2·9 grs. These crystalline scales dissolved in boiling rectified spirit, and exactly resembled cholesterine. The liquid, even after filtration and complete separation of the scales, deposited a minute quantity of flocculent matter and red particles, and became transparent.

I operated upon 500 grs. The drying was conducted first over the ordinary steam-bath, and then in Berzelius's apparatus.

1000 grains of the filtered liquid yielded

Water	927.4
Albumen	59·2
Fatty matter dissolved by æther	Trace
Organic matter dissolved by alcohol	1·2
Ditto ditto water	2·2
Chloride of sodium, with trace of chloride of potassium	6·0
Soda and lime, with sulphuric, phosphoric, and carbonic acids	4·0
	1000·0

Liquid of ascites containing only a trace of albumen.

Mary Jukes, æt. 43, became a patient of the Queen's Hospital, Feb. 1, 1843. Has had three children. Ill during the last nine years. Was tapped for ascites twelve months ago by Mr. Crompton, of this town, Ascites. Measures about 3 feet 3 inches in circumference at the umbilicus. Pain in right hypochondrium, shooting to the right shoulder. Frequent nausea, and occasional vomiting. Pyrosis. Appetite capricious. Never had jaundice. Catamenia reported regular. Urine scanty, not albuminous. Has not been accustomed to rise in the night to pass water. Tongue moist and coated. Bitter taste. Bowels generally confined. Prolapsus uteri. She still continues under my care. A great variety of medicines were prescribed, consisting principally of diuretics, tonics, and laxatives. But the circumference continued to remain nearly the same; sometimes slightly diminishing, at others slightly enlarging. At length, at the importunate request of the patient, I consented to the operation of paracentesis, which accordingly was performed by my respected colleague, Mr. Knowles, Dec. 16th, 1843. Fifteen and a half pints of clear liquid were evacuated. The patient has continued to be much relieved. The effusion probably depended on obstruction in the portal system.

Character of the liquid.—Colourless and limpid, like water. Sp. gr. 1007·2; slowly restored the colour of reddened litmus. *No turbidity occasioned by boiling.* Slight milkiness by nitric acid. Turbidity and precipitation of flocculent matter by tincture of galls in a much greater degree than by nitric acid. I operated upon 500 grains. The evaporation was effected first in Berzelius's apparatus, and then two days over sulphuric acid under a glass shade not exhausted.

Analysis of 1000 grains.

Water	987·60
Organic matter	3·10
Saline matter	9·30
	1000·00

The organic matter probably consisted in part of albumen in combination with soda. The saline matter was principally composed of chloride of sodium; it contained, also, a

minute quantity of earthy phosphate, a trace of alkaline sulphate, and some alkaline carbonate. This specimen of ascitic liquid is exceedingly interesting in containing only an extremely small quantity of albumen.

These analyses are merely approximations to truth, and are probably sufficiently accurate for physiological and pathological considerations. The indeterminate organic matter is always a source of perplexity, and evidently undergoes changes during the analytical manipulations. The phosphoric and sulphuric acids found in the incinerated residua are derived by oxidation during the process of incineration of the sulphur and phosphorus existing in the albumen. Consequently, we have a source of error arising from the addition of oxygen to these elements.

[To be continued.]

RECORD OF CASES.

By Thomas Mayo, M.D. F.R.S.
Physician to the Infirmary of St. Marylebone.

(For the London Medical Gazette.)

[Continued from page 542.]

It has been remarked by Dr. R. Willis, in an Essay on Malformation of the Heart, relatively to cyanosis, that "the only explanation that could be given of the absence of cyanosis in certain cases, in which imperfections of the auricular and ventricular septa have been discovered, would be grounded on the accurate maintenance of the proportion between the powers of the heart and the resistance which it has to overcome*." The following case is one in which this conservative principle had acted probably under greater disadvantages, for a longer term of years, than have usually been adduced in the records of such cases.

Mary Thackeray, a stout tall woman, came into the St. Marylebone Infirmary on the 3d of December, 1841. She described herself as labouring under an habitual winter cough; said that, about a year ago, she had an acutely painful swelling of the great toe, and that she is subject to sudden difficulties of breathing, obliging her to jump up when prone at the time of their occurrence. The pulse was small and quick. Examining the thorax, I found considerable cardiac impulse and thumping, dulness over a large space in the cardiac region, and loud systolic bruit at the apex. In repeated examinations I found, beside the above symptoms, occasional large crepitation, principally above the base of the right lung, with deficient vesicular penetration at that part. The sputa, on her coming into the infirmary, were mucous and rather tenacious; they became somewhat rouillées and mucopurulent, and then lost their tenaciousness. A slight attack of pneumonia was occurring at that time, which was obviated by leeches, a blister, and the following expectorant mixture:—

Misturæ Tragacanth Co. ʒxj.; Potassæ Nitrat. ℈j.; Tincturæ Camphoræ, ʒss.; Tincturæ Scillæ, ♏xv. 6tâ quâque horâ sumend.: with Pil. Scillæ c. hydrarg. bis quotidie.

On the 23d of December I find it noted by me, that the dyspnœa was then trifling, but that cough came on irritably when the patient was recumbent and her head low. But on the night of the 24th she underwent a severe fright from the violence of another patient in the ward. Much fluttering at the heart ensued on this; and then first the visage took a very purple hue. It was observed also by her that the urine, always rather deficient in her, then became more so. The above mixture was now changed for—

Misturæ Ætheris Co. ʒiss.; Vin. Ipecac. ♏xv.; Tincturæ Humuli, ʒss. ter.

And she became, on this plan, more easy and composed; but the cyanosis remained unaltered. On the night of the 28th of December she had taken—

Misturæ Camphoræ, ʒiss.; Liquor Opii Sedativ. ♏xxv.

And had settled comfortably to sleep. At 4 o'clock the next morning she died suddenly.

A perusal of the autopsy of this case may perhaps suggest the remark, that this woman's circulation was in an unfit state for opium; that its sedative effects may have been too great.

The contents of the cranium were normal. The heart weighed 18½ ounces. The right auricle was large; its muscular substance well developed. The right auriculo-ventricular opening was also large, but tolerably proportioned to the tricuspid valves. These valves, rather larger than usual, were white and thickened, particularly near the free edges; their columnæ carneæ were remarkably developed. The right ventricle was extraordinarily large, and its walls from three to four-eighths thick; the columnæ carneæ well marked; the semilunar valves of the pulmonary artery perfect. The left auricle was large and fleshy, thicker than the right; there was an open communication between it and the right auricle in the situation of the foramen ovale, extending an inch and a quarter from below backwards, and half an inch in the opposite direction. Two membranous bands, extending from the upper

* Medical Gazette, Vol. 32, p. 127.

to the lower portion of the auricle, divided this opening into three unequal parts. The left auriculo-ventricular opening was normal; the valves ill formed. The under mitral valve almost atrophied; the upper enormously large, about an inch and a half long, and broad in proportion. The left ventricle was greatly hypertrophied; the columnæ carneæ large. The pulmonary artery and veins were greatly distended and thickened, and were less supple in their coats than usual. The lungs exhibited a few points of semi-cartilaginous hardness at their summits; they were congested with blood, and somewhat œdematous, but everywhere crepitant. The liver large, of the nutmeg character; its weight 64 ounces. The kidneys were small. The other abdominal viscera were normal; as was the brain.*

In this monstrous case of perforate foramen ovale, the patient had attained her 57th year, a strongly made and not unhealthy woman, entirely free from the purple hue which belongs to a circulation thus rendered imperfect. In what way, or by what immediate agency, that arrangement was destroyed, which gave, for the most part, a right course to the respective volumes of blood, when the sudden fright incurred by the patient occasioned an unfavourable turn to her symptoms, and what was the immediate cause of death, are questions of equal difficulty and interest. One important practical consideration suggests itself in relation peculiarly to this case, and also to many others of less degree which have been collected,—that structural lesions, or diseases of a fatal nature, are not incompatible with prolonged duration of life. This consideration acquires increasing importance as medical science increases the catalogue of physical symptoms by which such lesions or diseases may be recognized. A disregard of it will produce a feeble and despondent use of medical measures, when abnormal states of a fatal tendency have been discovered; and thus the march of pathology will interfere with, instead of promoting, that of therapeutics.

The following case may strengthen this argument, by also presenting a long duration of cardiac mischief, though of another kind, which was at last apparently rendered fatal rather by the intemperance of the patient than the nature of the disorder.

* The preparation was put up by Dr. Boyd; and is at the Marylebone Infirmary.

Joseph Smith, aged 32, brewer's drayman, was admitted into the Marylebone Infirmary, September 26th, 1842. He was a stout, fair, sanguine person, and was, throughout, of a very placid, tranquil, enduring manner; he confessed that he had been intemperate. Came in under intense dyspnœa; visage purple, dilated; sharp and strong impulse of a struggling kind at apex of heart; its diastolic sound scarcely perceptible. His tongue dry, and very foul; urine scanty, not passed without catheter, very high coloured, abdomen distended; legs œdematous; coffee-ground vomiting; very low pulse, the effective beats of which were about twenty in the minute. Conjunctiva, and visage generally, yellow. The urine was instantly set free in this case, and the dyspnœa sensibly relieved by—

Acid. Hydrocyan. Dilut. ℥v. ex Haust. Efferves. 8vis. horis.

Which was equally effectual in the first of these points ever afterwards. I should observe that I gained but little history with this man, except that he had had rheumatism severely many years before, but had been actively employed till within the last few weeks. His state, from his admission to his death, was as follows:—

The yellowness of conjunctiva and foulness of tongue gradually relieved, with much general improvement, principally noticed while he was under salivation from mercury. Afterwards, a mitigated recurrence of symptoms, gradually terminating in sleepiness, coma, and death, in about four months from the time of admission. Capability, at all times, of lying prone; coffee-ground vomiting recurred whenever his urine was suspended or materially diminished; the urine highly acid; no albumen.

Physical symptoms.—Breathing generally vesicular, but often with large crepitus. Dulness over a large cardiac space. Heart's action heard distinctly over every part of the thorax; but remarkably strong pulsation and impulse, as if immediately under the ear, at a defined point under the right clavicle; this, however, varying very much in relation to the application of leeches, by which it was always mitigated. Second sound of heart always inaudible. Alvine excretions generally healthy. Mind at all times perfectly collected, until coma supervened.

With respect to remedies, active purgatives, particularly Pulv. Jalapæ c. Hyd. Chlorid. was frequently given, and always with great relief. Also Olei Crotonis, gtt. j. often profited during the latter part of the case. Calomel was carried to salivation with great relief of dyspnœa. As diuretics, the hydrocyanic acid in an effervescing saline, and next to this the Mistura Ætheris c.

Scillæ of the Marylebone Pharmacopœia, with Tincturæ Lyttæ, ɱxv. profited greatly.

He did not awake distressed, after taking, horâ somni, Morphiæ Muriat. gr. ¼, which was often thus given. Leeches occasional.

Autopsy.—Brain normal, except that it was exsanguine. Heart everywhere adherent to pericardium, but adhesions in many points soft; weight 22 ounces. Right ventricle normal; left, hypertrophied; valves normal, except that the edges of the aortic valves were thickened. Brachiocephalic artery much narrowed in calibre just before its bifurcation, and at the point in which the heart's impulse was heard so loudly. Lungs gorged, œdematous, not hepatised or tubercular. Liver very large, but healthy, as were the other abdominal viscera.

[To be continued.]

AN ACCOUNT

OF

PROF. MULDER'S RESEARCHES

ON

THE EXISTENCE OF OXIDES OF PROTEIN IN THE BLOOD.

By Golding Bird, A.M. and M.D.

Assistant Physician to, and Lecturer on Materia Medica at, Guy's Hospital.

Previously known compounds of protein.—Formation of oxy-protein from albumen and fibrin.—Experiments on some products of inflammation.—Physiological inferences.—Theory of inflammation.

Professor Mulder, of Utrecht, is well known for his discovery of protein, and of the series of compounds into which it enters. In continuing his researches into the nature of albuminous elements, he has been led to the discovery of some remarkable facts, which promise to throw much light over the obscure subject of the nature and composition of the products of inflammation. The following account of these researches cannot fail to be of interest to the physiologist, more particularly as no detailed account of Mulder's recent discoveries* has appeared in the English language.

A few years ago, Professor Mulder discovered, that when albumen, fibrin, casein, gluten, legumine, hair, or any of the varieties of animal or vegetable albuminous principles, were dissolved in a dilute solution of potass, a fluid was obtained from which acetic acid precipitated a white flocculent deposit, which presented the same characters, and possessed the same composition, from whatever variety of albuminous principle it was prepared. This body he named protein, and regarded it as the essential constituent of the various albuminous products and tissue of the animal economy; the differences existing between these substances depending either upon one being more highly organized than another, or upon the presence of some portions of sulphur, phosphorus, oxygen, or the elements of water.

According to Mulder, protein consists of—

40	equivalents	of carbon.
31	"	hydrogen.
5	"	nitrogen.
12	"	oxygen.

Fibrine of blood consists of—

10	equivalents	of protein.
1	"	sulphur.
½	"	phosphorus.

Casein consists of—

10	equivalents	of protein.
1	"	sulphur.

Middle coat of arteries consists of—

1	equivalent	of protein.
2	"	water.

Animal mucus (of the gall-bladder) consists, according to the recent researches of Dr. Kemp, of—

1	equivalent	of protein.
3	"	water.

And a similar composition has been lately assigned, by Dumas, to vitelline, the albuminous element of the yolk of egg.

The new discoveries of Professor Mulder consist in the detection of two compounds of protein, or its elements, with oxygen, and the announcement of the existence of these two oxides in the blood. He has also offered some speculations regarding the part played by these compounds in producing certain of the phenomena of inflammation. These oxides consist of—

A deutoxide = 1 protein + 2 oxygen.
And of a tritoxide = 1 protein + 3 oxygen.

The first of these compounds is soluble, and the second insoluble, in water. When speaking of these compounds as contemporaneous products,

* Annalen der Chimie und Pharmacie, Band 47, Seite 300.

Mulder uses the generic term *oxy-protein.*

It has been long known that fibrin and albumen, however pure, will, by long boiling, yield to water a considerable proportion of soluble matter: this has generally been regarded as gelatine, into which the fibrin or albumen was presumed to have been converted. M. Bouchardat has shewn that no evidence of the formation of gelatine can be obtained in the water with which fibrin has been boiled; but the buffy coat of inflamed blood, which has been generally regarded as consisting chiefly of fibrin, has been stated by this excellent chemist to contain gelatin.

Formation of oxy-protein from albumen and fibrin.

A. When fibrin or albumen, obtained from either healthy or inflamed blood, or coagulated white of egg, is boiled in water for four hours, the fluid being decanted, replaced by a fresh portion, and again boiled for the same length of time, and so on, the matter submitted to experiment is resolved into two portions; one which dissolves in water, and the other which remains insoluble. Both these contain less carbon, hydrogen, and nitrogen, than fibrin or albumen, but more oxygen; consequently an absorption of the latter must have taken place during the boiling. The watery solutions, when evaporated to dryness, leave an extract which is partly soluble in alcohol: this portion is the result of a true decomposition, or metamorphic change, of part of the protein; whilst the part insoluble in water, and the matter dissolved by the latter, but left unacted upon by the alcohol, are the results of a simple oxidation.

B. Some fibrine of ox's blood was boiled after being well washed for four hours; the filtered fluid was evaporated to dryness and digested in alcohol; the undissolved portion was dried, and, on analysis, gave the results shewn below (1). The portion undissolved by the water, after digestion in alcohol, was also dried and analysed; its composition is shewn below (3).

Another portion of fibrin was boiled in a Papin's digester for some days; the soluble portion, after digestion with alcohol, was, on analysis, found to be constituted as shewn below (2); and the composition of the part unacted upon by the water is shewn in column 4.

	Dissolved by the water.		Undissolved by the water.	
	1.	2.	3.	4.
Carbon	51·69	51·84	53·69	53·72
Hydrogen	6·64	6·78	6·90	6·73
Nitrogen	15·09	15·67	15·63	14·82
Oxygen	26·58	25·71	23·71	24·73

C. Albumen of white of eggs was boiled for 150 hours in water; oxygen was absorbed, and the albumen was converted into two portions, a soluble and an insoluble matter; these, when freed from metamorphic products by digestion with alcohol, were submitted to analysis, and found to possess the following compositions:—

	Dissolved by water. (1.)	Insoluble in water. (2.)
Carbon	51·38	54·99
Hydrogen	6·78	7·16
Nitrogen	15.01	15·33
Oxygen	26·82	22.52

The soluble substance resulting from the oxidation of protein is thus shewn to be precisely identical by ultimate analysis whether obtained from fibrin or albumen, by long or short ebullition. A difference only exists in the composition of the matter undissolved by water when albumen of egg is substituted for fibrin of blood.

D. If the buffy coat of inflamed blood be boiled for a short time in water, and the matter dissolved be submitted to the test of analysis, it is found to be constituted exactly the same as the soluble bodies formed by oxidation of albumen and fibrin by boiling (B, C).

To this body Mulder assigns the formula $C_{40}\ H_{32}\ N_5\ O_{16}$ and the per centage compositions calculated from this approaches closely to the results of analysis (B, 1, 3; C, 1).

40	equivalents	Carbon	= per cent	51·45
32	,,	Hydrogen	= ,,	6·72
5	,,	Nitrogen	= ,,	14·92
16	,,	Oxygen	= ,,	26·93

This formula exactly corresponds to that of hydrate of tritoxide of protein.

		Carb.	Hyd.	Nit.	Ox.
1	Equivalent of Protein =	40	+ 31	+ 5	+ 12
3	,, Oxygen =				3
1	,, Water =		1		1
		40	+ 32	+ 5	+ 16

E. The tritoxide of protein may be conveniently prepared by passing a current of gaseous chlorine through almost any albuminous fluid, as serum of blood: a dense white precipitate falls,

which consists of 1 Protein + 1 Chlorine + 3 Oxygen; when this is digested with ammonia, the chlorine is removed, and a hydrated tritoxyde of protein left. (Pr. O_3 + H O).

The tritoxide generally contains an atom of water, unless combined with a metallic oxide, and then it is displaced by the oxide, the compound being precipitated in combination with undecomposed hydrate of tritoxide of protein. The general formula for these double combinations is (Pr. O_3 + MO) + (Pr. O_3 + HO). MO standing for the metallic oxide, and Pr assumed as the symbol of protein.

F. Tritoxide of protein is soluble in cold water, insoluble in alcohol, ether, or oils; it does not affect litmus or turmeric paper; it is very soluble in solution of the alkalies. The nitric, sulphuric, hydrochloric, phosphoric, and tannic acids, precipitate the tritoxide from its solutions. Bichloride of mercury, as well as both neutral and basic acetate of lead, throw down insoluble combinations of protein from its solution (as double salts?). When a solution of acetate of lead is added to one of tritoxide of protein, an insoluble combination (Pr O_3 + Pb, O) + (Pr O_3 + H O) falls). The acetic acid then set free holds more of this compound in solution, which falls on the addition of ammonia.

G. The composition of the insoluble matter into which fibrine is converted by ebullition with water may be represented by the formula C_{40} H_{31} N_5 O_{14} which, when reduced to per centage composition, corresponds very closely with the actual results of analysis, (B, 3, 4).

40 equivalents	Carbon	= per cent.		53·36
31 ,,	Hydrogen	= ,,		6·75
5 ,,	Nitrogen	= ,,		15.45
14 ,,	Oxygen	= ,,		24·44

This matter is identical with the substance obtained by Van Laer and Scherer by digesting hair in caustic potass, and precipitating with an acid. It is a binoxide of protein; for

		C.	H.	N.	O.
1 equivalent	Protein =	40	+ 31	+ 5	+ 12
+ 2 ,,	Oxygen				2
=	Binoxide (Pr, O_2) =	40	+ 31	+ 5	+ 14

H. Exceedingly diluted hydrochloric acid rapidly converts fibrin into a gelatinous mass nearly all soluble in water, whilst it has scarcely any action on coagulated albumen. The addition of ammonia to the acid solution of fibrin precipitates an anhydrous tritoxide of protein. This has been termed *albuminose* by Bouchardet. The small portion undissolved by the hydrochloric acid (*epidermose* of Bouchardet) is probably binoxide of protein according to Mulder.

I. Coagulated albumen differs from fibrin essentially in the manner in which it undergoes oxidation by ebullition with water. Albumen is converted directly into soluble tritoxide of protein, the undissolved matter being unchanged albumen (C 2). Fibrin, however, is converted first into an insoluble binoxide, and subsequently into the soluble tritoxide.

Experiments on the products of inflammation.

K. When fresh buffy coat of inflamed blood is digested in water, it is divided into two portions—a soluble, consisting of tritoxide of protein, and an insoluble part, consisting of binoxide of protein and fatty matter.

L. 8·689 grammes of buffy coat of pleuritic blood contained—

Matter soluble in water	0·203	(tritoxide of protein ?)
,, insoluble ,,	1·220	(binoxide ? fat, &c.)
Water	7·266	
	8·689	

The aqueous solution is perfectly free from gelatine.

M. From the experiments of Von Baumhauer, it appears that buffy coat of inflamed blood yields to ether 3·876 per cent. of fat, and to this he attributes the floating of the buffy coat on the surface of coagulating blood.

N. When blood is heated sufficiently to coagulate its albuminous ingredients, digestion with water removes much tritoxide of protein, which can be precipitated by salts of lead and mercury.

It is obvious, that the serosity of Dr. Bostock, which exudes from coagulated serum, the muco-extractive matter

of Dr. Marcet, and the extrait de viande of Berzelius, consist chiefly of the tritoxide of protein of Prof. Mulder.

O. False membranes (pleuritic?) were analysed eight years ago by Mulder, and he then gave the following as their composition.

Cellular tissue . . .	1·4
Fibrine	28·6
Gelatine . . . }	70·0
Extrait de viande . . }	
	100

In his late essay he remarks that the fibrine of this analysis is really chiefly composed of binoxide, and the gelatine and extrait de viande, of tritoxide of protein.

Chemico-physiological inferences.

1. False membranes, the result of serous inflammation, contain gelatine derived from the tissue on which they are formed: in other respects their composition is identical with that of buffy coat of inflamed blood.

2. The buffy coat is generated from the albumen of blood: it consists essentially of the two oxides of protein $Pr O_2 + Pr O_3 + HO$.

3. The buffy coat is formed in consequence of the excess of the two oxides of protein in the blood; and its floating upon the surface simply depends upon its levity from its presence of nearly four per cent. of fat.

4. When moist fibrin is exposed to the air it absorbs oxygen, and forms a certain quantity of carbonic acid gas. In consequence of this change all the published analyses of fibrin are regarded by Mulder as containing too little carbon, hydrogen, and nitrogen.

5. The two oxides of protein always exist in certain proportion in the blood; they are generated in the lungs during the process of respiration. By this oxidation the protein becomes the means of conveying oxygen to the tissues in the arterial blood. Mulder regards the oxy-protein as the true carrier of oxygen: he considers Liebig's idea of the red globules performing this function as quite unsatisfactory.

6. During inflammation and fever, a large excess of oxy-protein is generated, and may be found in the blood.

7. During the cooking of meat, whether by roasting or boiling, oxygen is absorbed; the fibrinous elements are converted into both oxides of protein; whilst the albuminous matters are only partly changed into tritoxide.

Theory of the connection between the presence of oxy-protein and inflammation.

The change of protein into its oxides, which, as we have seen, is believed by Mulder to take place, during the action of the oxygen of the air upon the blood from the right heart during the process of respiration, is under certain circumstances considerably increased. The respiration becoming more rapid, a larger proportion of oxy-protein is generated, and ultimately the blood is so loaded with it, that on being removed from a vein a dense crust of the two oxides of protein mixed with fat floats on the surface, forming what is denominated the buffy coat, or inflammatory crust.

The pathological condition denominated fever is supposed by Mulder to be cotemporaneous with the development of more oxy-protein than in health; and when a large excess of this matter is collected, all the phenomena of inflammation are developed, and these compounds of protein are effused as inflammatory products (false membrane, lymph, pus, &c.)

Whilst Mulder agrees with Liebig, in the opinion that an increased absorption of oxygen exists during fever and inflammation, he altogether differs from him regarding the element which acts as the absorbing agent. Liebig, as is well known, assumes that the red particles absorb oxygen, the iron existing in them being changed from protoxide to sesqui-oxide; a view based on mere assumption, and totally unsupported by any evidence derived from chemical analysis. Mulder, on the other hand, having demonstrated the existence of two compounds of protein with oxygen, and having, moreover, shewn that the existence of these bodies in the blood actually gives it the appearance long ago assumed as characteristic of the presence of inflammatory action, in addition to the fact that the very matters effused as inflammatory products are chiefly composed of these oxides, has certainly very considerably advanced our knowledge of the chemistry of inflammation.

Mulder further attributes the metamorphosis and removal of effete tissue

(destructive assimilation), to the influence of oxygen, as Liebig does, but not to the oxygen conveyed in the red particles, as imagined by the latter chemist. On the contrary, he supposes that the oxy-protein generated during respiration in the arterial blood, reaches the capillaries; and whilst the protein is deposited where new tissue is required, the oxygen previously combined with it oxidises and re-arranges the elements of effete and exhausted structure into a form fit for their removal in a state of solution.

Mulder offers no speculation regarding the origin of fever; he evidently regards its presence as the pathological condition which induces the generation of oxy-protein, but regards the existence of the latter in the blood as the cause of the development of the phenomena of inflammation.

These speculations are of peculiar interest in these days of humoral pathology, and have the advantage of being supported by experiment to a much greater extent than the analogous hypotheses of Liebig. They are deserving of great attention, but, like all chemical theories of health or disease, should be admitted with caution, as a more melancholy error can scarcely be committed than that of explaining the phenomena of the animal organism too exclusively on chemical principles.

ON A PECULIAR AFFECTION OF THE EYEBROWS.

To the Editor of the Medical Gazette.

SIR,

I SEND you the following observations, in the hope that their publication may be the means of obtaining from others additional information on the subject of which they treat. Should this object appear to you sufficient to justify their insertion, you will oblige me by giving them a place in the pages of your valuable journal.—I am, sir,

Your obedient servant,

GEORGE ROBINSON,
Fellow of the Royal Medical and Chirurgical Society, &c.

24, City Road, Finsbury Square,
January 31st, 1844.

There are many affections which, without being dangerous to life, are in themselves sufficiently inconvenient, and become still more unpleasant by the effects to which they subsequently give rise. Among the extensive group of minor ailments to which we are subjected, none perhaps are regarded with more solicitude by the great mass of mankind than those affecting the integrity and expression of the countenance.

Having, by a conjunction of favourable accidents, been enabled to detect one, and probably a chief, cause of that partial or complete destruction of the eyebrows and eyelashes, instances of which are not unfrequently observable in all ranks of society, I shall now proceed to narrate the circumstances which led me to its discovery, in the order in which they occurred to me.

In the summer of 1842 I happened to meet with a lady who had lost the greater part of her eyebrows and eyelashes, and was thereby very much disfigured. When questioning me as to the possibility of the growth of hair ever being re-established, she communicated to me the history of her case, the substance of which may be thus stated. The complaint was first observed about ten years previously, viz. in the autumn of 1832 or 1833, when the eyebrows gradually became so much detached from their connection with the skin that, each time the face was washed, some half-dozen adhered to the towel. An intense itching of the skin covered by the eyebrows was then also, for the first time, remarked. This sensation became almost intolerable on entering a warm apartment, or on applying to the part any warm or stimulating substance. This irritability of the skin, doubtless occasionally aggravated by instinctive attempts to relieve it by friction, caused the integuments of the eyebrows constantly to assume a fiery red colour.

From the peculiar sensation accompanying this symptom, the patient felt convinced in her own mind that it was occasioned by the lodgement of some minute insect in the skin of the affected part; and she mentioned this idea to various medical men whom she consulted. These gentlemen all treated the supposition as chimerical; though her ordinary medical adviser informed her that he had met with many similar cases, in which the eyebrows, eyelashes, and in one instance the whiskers of a

military gentleman, had fallen off without any assignable cause; the complaint having, in all of them, been preceded and accompanied by the same symptoms of intolerable itching, and intense redness of the skin of the affected parts. He ordered the hair of the eyebrows to be shaved off, and the skin to be frequently washed with cold water. The other gentlemen who were consulted recommended various local applications; but, if I may judge of their views of the pathology of the complaint from the prescriptions which were shewn me, they appear to have considered it as symptomatic of some intestinal disorder, for which various alteratives and aperients were ordered. One physician recommended a blister to be applied behind each ear: but the pathological views which suggested this remedy are to me quite unfathomable.

At length, after enduring the annoyance of the complaint during a period of four years, and being tormented during the whole of that time by numberless local applications, the chief effect of which was a momentary increase in the irritability of the skin, the morbid sensation and the loss of hair gradually ceased, and have never since returned.

Continuing throughout unshaken in her belief as to the real cause of the disorder, the patient had carefully preserved every minute object that was perceptible on the skin between the insertion of the hairs, or that adhered to the latter after their removal. Among these particles she fancied some were of a more regular form than the rest; harder to the touch, and apparently somewhat oval in their shape. The attention of her medical attendant was directed to them; but they were too minute to afford any other than a very indistinct idea of their nature to the naked eye. He, therefore, again assured her that her idea was in reality entirely unfounded.

At a subsequent period, after she had ceased to have medical advice on the subject, an object much larger, though still too minute to be clearly distinguished in all its parts by the naked eye, was detected among the lighter coloured particles. This object, together with a quantity of particles collected from the same source, and which had been carefully preserved during the intervening period, were presented to me at the time I received this history.

On examining the whole of these particles under the microscope, I found, as might be expected, the greater part to consist of minute portions of epidermis, the scales of which were matted together, and slightly stained by a bloody serum. But with these there were also distinctly visible two bodies, which, from their shape, and from the firmness with which they preserved it under pressure, were evidently the ova of some small insect. In one of them the process of development had already commenced; for on it were seen six minute protuberances, the relative position of which indicated them as rudimentary legs.

The larger and darker object, though slightly mutilated in consequence of the great length of time during which it had been preserved, was nevertheless sufficiently perfect to enable its nature to be satisfactorily ascertained; and it presented all the characteristics of a fully developed insect. Its body, oval in form, was much wider posteriorly than anteriorly; the legs, six in number, were chiefly remarkable for being long, flexible, and tapering. It should be remarked that this was the only perceptible insect that was ever obtained from the eye-brows; though the minute oval bodies were not unfrequently met with. Having thus satisfied myself as to the existence of two ova in these particles, and a full-grown insect having been obtained from the same source, I could not but believe in the possibility of the disease in question having been occasioned by the lodgement of these insects in the skin of the affected part. The irritation caused by their presence there would readily account for the symptoms of redness and itching; and the subsequent inflammation would inevitably tend to weaken the attachment of the hairs to the subjacent skin.

On consulting some books, I could not find that this affection had been described by writers on diseases of the skin; nor, among the various figures of insects said to infest the human body, could I perceive any which corresponded precisely with that in my possession. As I intended to investigate the nature and source of these insects at some future opportunity, I deferred publishing any account of this observa-

tion, till its truth should be fully established by additional facts. The subject has thus been allowed to remain dormant for a few months, when my attention was again suddenly directed to it by the accidental discovery of the same insect on the body of the common house-fly. This circumstance occurred late in the autumn of the same year, when happening to place a fly under a microscope, I perceived two insects fastened to its body. On detaching them, I found to my utter surprise that they precisely resembled the full-grown insect from the eye-brow; the shape of which had, from frequent examination, become quite familiar to my eye. On subsequently placing it by the side of these living insects the resemblance was most perfect.

In the course of last summer, about the month of July, I resumed my observations on the flies, in order to satisfy myself that they were extensively infested with these insects; and I had not examined half a dozen before I met with some specimens precisely similar to the last. I had also the satisfaction of speedily obtaining from the same source more than a dozen young insects the size, shape, and colour of which tended still further to strengthen my opinion as to the identity of the insects, infesting the fly and the human skin; for their bodies were perfectly oval in their shape, and of a light colour approaching to greenish-yellow, in both which particulars, as well as in size, they so closely resembled the ova which I first examined, that, had the latter been furnished with their proper legs and antennæ, it would have been impossible to distinguish one from the other.

I have unfortunately, from neglecting to secure them properly, lost the whole of these young insects; but I now possess the full-grown one from the eye-brow, the two obtained from the fly in the autumn in 1842, and six similar ones secured last summer: I should have sent the proper name with this communication, but have been disappointed in obtaining it. But as it is probably familiar to entomologists, and a supply can readily obtained in the proper season of the year, this omission may be considered of the less importance. It is almost unnecessary to point out the facility with which these volatile carriers of vermin may deposit one of these undesirable companions on a part of the body so much exposed, and so retentive of extraneous matters, as the eyebrows. And it is also evident that the greatest attention to personal cleanliness may fail to protect an individual from this infliction.

The chief practical points on which the foregoing observations bear, are the following:—

1. The prevention of the complaint.
2. The symptoms distinguishing it when fully formed.
3. Its treatment.

It is evident that the prevention of the disorder can only be effected by guarding against the visits of those winged tormentors which convey its cause. But in the early part of a hot summer's morning, they may, during sleep, lodge upon the face unseen and unfelt, and thus originate the complaint. Perhaps, the best preservative, in addition to general cleanliness, would be afforded by regularly brushing the eyebrows, night and morning, during the summer months. For the full-grown insect is sufficiently large to be removed by a brush; and if any had lodged there during the preceding interval, they might, in this manner, be swept away before depositing their ova in the skin. And that the fully developed insects can be thus displaced is rendered probable by the fact, that during the four years the complaint existed in the case here detailed, only one full-grown specimen was met with.

The symptoms appear to be sufficiently striking. Whenever, during the heat of summer or in the autumn, a violent itching of the eyebrows, or any other part of the face covered with hair, is felt for the first time, accompanied by an intense redness of the subjacent skin, and followed by a gradual loss of the hair, these symptoms will, I think, generally be found connected with the existence of the peculiar cause above mentioned. I have occasionally in various public places had my attention directed by the symptom of redness alone to the eyebrows of several individuals; and the loss of hair was generally very obvious.

As to the treatment, the chief indication is clearly the removal of the cause; but this would seem not to be very easily effected. For so long as the ova are deposited, either in the skin itself, or at the point of insertion of the hairs into it, some difficulty must be ex-

perienced in finding a substance that shall at once eradicate the cause of the complaint. In the case above mentioned, the local applications appear to have been very numerous and diversified. Thus vinegar, spirit of camphor, mercurial ointment, tobacco infusion, were with many other remedies tried ineffectually. And whatever treatment be adopted, it must evidently be continued for some time before a perfect cure can be obtained.

I shall not at present add more than a repetition of my wish, that these remarks may be the means of directing the attention of others to the subject, and may thus elicit further information.

I cannot, however, avoid mentioning two questions which were suggested by the facts here detailed, viz.

1. To what extent are the parasitical insects affecting the exterior of the human body, that of scabies for example, identical with, and derived from, those infesting the bodies of certain of the lower animals?

And secondly, are not several, if not all the forms of pruritus—complaints of the incurability of which I have more than once observed, in the pages of this and other medical journals—occasioned by the lodgement of some minute parasitical insects in the skin, and not by mere inanimate dirt?

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

On the Nature and Treatment of Tic Douloureux, Sciatica, and other Neuralgic Disorders. By HENRY HUNT, M.D. &c. 8vo. pp. 204. London, 1844.

THE author remarks, with some justice, that the object of the majority of those who have written on tic douloureux has rather been to advocate the efficacy of some favourite remedy, than to inquire into the nature and causes of the malady. The result has been a somewhat empirical treatment; various remedies having had for a time a reputation above their merits, and then fallen into disuse. Carbonate of iron, bark, and arsenic, may be taken as illustrations. Dr. Hunt having practised in the south of Devon, where the disease appears to be common, has had ample opportunities of studying it; and he has been led to conclude that it has its origin in different persons from dissimilar causes, and opposite conditions of the system.

In the work before us he has selected cases in illustration of this principle, and arranged them under corresponding heads; to which he has appended some observations, and a detail of the means which he found most efficacious in the cure.

We have first a general description of tic douloureux, and then follows an account of the disease in different forms, as the tic from neuralgic habit—from dyspepsia—from congestion of the liver and other viscera. After this our author proceeds to describe the disease as dependent upon anæmia—from disease of the spine, brain, uterus;—that from mechanical causes, and from the retrocession of eruptions. Sciatica and periodical headache also come in for their share in the discussion.

The general description of the disease contains nothing remarkable, but is a very fair account of the phenomena which usually present themselves. The author remarks, that the intensity of the suffering does not in any degree depend upon the particular cause which has produced it, but upon other circumstances connected with the peculiarities of the individual. Upon the whole, the portion of the work which relates to tic douloureux connected with indigestion is the most interesting, and may be taken as a very good illustration of our author's views and mode of handling his subject.

A considerable variety of nervous affections are unquestionably dependent upon the state of the digestive system; although it not unfrequently happens that no particular distress is experienced in any of those viscera. The immediate effect sometimes produced on a distant part by the condition of the stomach is well illustrated by a reference to the case of Dr. Wollaston, who was suddenly seized with pain in the ankle from eating an ice; which was relieved the moment the stomach was emptied by the act of vomiting. Dr. Hunt gives a case in illustration of the same principle; and as it is an instructive one, and not very lengthy, we subjoin it:—

"The very Rev. Dean of ——, a gentleman who had enjoyed unusually good health, finding himself inclined to grow rather too stout, although he was arrived at a period of life when such a tendency not unusually shows itself, imprudently altered his plan of living: after having lived generously, and having taken little exercise, he adopted suddenly a very spare and abstemious diet, accompanied at the same time by excessive walking exercise, by which he was reduced to a state of great general weakness. The tone of his stomach was very seriously injured, and unequivocal symptoms of indigestion, and among them the presence of acid, were the result.

"After a few weeks he perceived an uneasiness in the cheek; this increased in severity, and he was seldom free from pain, but it was much aggravated every night about eleven or twelve o'clock, then almost amounting to a distinct paroxysm. He applied to me in August, 1837: his general strength at this time had been much improved, for he walked eight miles to see me, and had the same distance to return home. The stomach also was somewhat improved, but still weak. He had constant pain in the cheek, which was much increased on pressure, making the operation of shaving a very painful one. The imperfect paroxysm of pain continued every night four or five hours, accompanied by severe shocks and plunges. There was no indication of the disorder of the stomach having extended to any other viscera; his tongue was slightly furred, and was a little swelled; the bowels very regular, and the evacuations healthy; the appetite was good, but the digestion was still imperfect. After an emetic and aperient draught of rhubarb and sulphate of potash, warmed with sal volatile, I gave him the following draught three times a day, an hour before his meals:—

℞ Liq. Arsenicalis, ℥iv.; Tr. Camph. comp. ℥xij.; Aquæ Cinnam. ʒx. M. ft. haustus;

increasing the quantity of the liquor arsenicalis daily, until he felt its action on the stomach, which he did when each dose amounted to twelve minims; it was then discontinued. As soon as he perceived the effect of the medicine, the violent plunges of pain diminished, slowly but regularly, until at the expiration of a fortnight they had altogether ceased. By this time the action of the arsenic had also subsided; he again took it in doses of five minims, and continued it till all tenderness and pain of the cheek was entirely overcome. This was effected at the expiration of a month from the time of my first seeing him. He then left my neighbourhood, with directions to take the medicine for some months, occasionally omitting it for a fortnight or three weeks, increasing gradually the interval, and decreasing the period, in which he took it.

"In January following I received the following account from him:—'Since I left your neighbourhood, I have had only two returns of tic, and those very slight; I think I continued to take your prescription in small doses for about a month, after my return to ——, and having discontinued it about a fortnight, I had a slight return of the spasmodic pain, which yielded immediately to the arsenic. On this occasion, I took it in still smaller doses, only twice a day, and not exceeding three drops at each dose. After about three weeks, I again discontinued it, and at the end of another fortnight had a slight attack of tic, which yielded instantly to your prescription, which I took in the same small doses for a fortnight, and for the last month I have been quite free from pain, though I suspect that the nerve is not quite sound, from a feeling of numbness and tingling, which I used to regard as a precursor of an attack.'

"After this time, the pain seldom troubled him, and only when his stomach became disordered.

"In 1841 he wrote me that by strict attention to diet, and above all, by abstaining from acids, and from the use of wine, and other fermented liquors, he kept the tic from annoying him.

"In this case many remedies had been taken without any mitigation of the pain, but with rather an aggravation of it."

In that form of the malady which results from disease of the spine, sudden and complete mitigation of the pain sometimes occurs on the application of the caustic; but in other instances even this fails to give any relief.

Disease of bone, where a nerve passes

over it, sometimes proves the source of very obstinate and severe neuralgia; and it is remarkable that the tic dependent upon the uterus seems to come next in succession in these respects.

Several very good cases are given of tic dependent upon local mechanical causes.

In his account of the various remedies applicable to neuralgia, a considerable space is devoted to the use of sedatives, which, our author remarks, are given in various ways, viz. in large doses at once; in comparatively small ones gradually increased; or in ordinary doses frequently repeated. Of these methods Dr. Hunt thinks the first the worst, and the last the most eligible; for example, giving the largest ordinary dose at short intervals, as every two hours, and in very urgent cases every hour, for three or four doses. In this manner our author has never seen any unpleasant symptom produced by sedatives. Relief having once been effected, a much smaller dose will be found sufficient to keep the pain under control. Belladonna is the narcotic which, in our author's hands, has most frequently answered, and the largest quantity he has administered "has not exceeded one grain for three successive hours." The sedatives must speedily be followed by some mild aperient, to guard against the risk of any accumulation.

Arsenic has been found by Dr. Hunt to be very powerful in some cases; and not only useless but hurtful in others. It acts most favourably on those of lax fibre and languid circulation, with profuse secretions. In such patients it sometimes succeeds far better than any other medicine, but often requires a good deal of patience and management. Dr. Hunt states that he has met with several cases in which the disease has resisted the arsenic in solution, and has nevertheless yielded to it in the solid form. When administered in this way, the dose varies from the twentieth to the tenth part of a grain, which may be made into pills with crumb of bread, previously rubbing the arsenic in a mortar with a little black pepper, and taking especial care that it is accurately divided into its appropriate doses. In some rare instances the arsenic produces an eruption; and it would seem, so far as the evidence yet goes, that where this is the case, it does not relieve the neuralgia.

The local remedies for neuralgia may be divided into two sets—sedatives and counter-irritants. Aconite, veratria, belladonna, and stramonium, are mentioned; and of these our author regards aconite as the most efficient. It produces a kind of paralysis of the part to which it is applied, and in this manner diminishes the sensibility of the nerve. When this passes away, the pain returns. The strength of aconite recommended by our author is a grain in a drachm of ointment. This is to be applied with the finger to the seat of pain, and gently rubbed upon it; the application to be repeated twice a day. Belladonna comes next in point of power, but the relief it gives is more temporary. A cataplasm, made of equal parts of linseed-meal and bruised stramonium seeds, is spoken of with praise. Veratria has always failed in Dr. Hunt's hands.

When the tic depends upon the state of the spine, the application of extract of belladonna to the back has sometimes been very serviceable. The proportions used were a drachm to two ounces of soap liniment. The effects are sometimes very powerful, and the remedy, therefore, requires considerable care in its use.

We are cautioned, in conclusion, that the treatment, both medical and general, often requires to be persevered in long after the pain has ceased, otherwise it is apt to return, even in cases which have been apparently cured.

Posthumous Extracts from the Veterinary Records of the late John Field. Edited by his Brother, William Field, Veterinary Surgeon, London. London, 1843. 8vo. pp. 236.

A series of valuable contributions from the papers of a first-rate veterinarian. We can afford room for the following extracts only.

"*Fracture of the bones of the knee.*—A mare belonging to Mr. H. B., in an unprepared state, was run at Oatlands, July 16, 1826, for a cup, heats. Though unfit to start, she won the first heat cleverly; but in galloping the second heat, suddenly stopped, and seemed ready to fall. The rider, Mr. St. Aubyn, dismounted, and the mare was with difficulty got to the stable.

"July 17th.—I saw her at Oatlands, and found the bones of both knees broken, particularly of the off. She stood up at times, and the knee-joints were bent outwards, forming bow-legs; but the principal weight was thrown upon her hind quarters: there was very little tumefaction.

"She was destroyed, and the bones sent to me: in one knee the seven larger bones formed sixteen pieces." (p. 37.)

"*Effects of tobacco infusion as a dressing for mange.*—Dec. 30th, 1817.—A horse, belonging to Colonel ——, at Hall's Stables, in Grosvenor Place, was dressed over with tobacco-water in order to cure the mange; this was about nine o'clock in the morning, and at half-past twelve a man came to say the horse was extremely ill. When I went to the stables I found him breathing very laboriously, sighing, and shivering; there was no pulse to be felt; at least the pulsations were not distinguishable. I ordered the tobacco-water to be washed off with warm water and scrapers; I desired four drachms of purging paste to be given immediately, with the following drink:—

"℞ Sp. Æth. Nit. ℥ss.; Tinc. Rhei. ℥ij.; Tinc. Zingiberis, ℥ss.; Aquæ, Oj. Mis.

"A similar drink to be repeated in three hours if he was not better; but, if much improved, not till the evening.

"The horse was seen again in the evening, when his pulse was very irregular: there was no shivering nor blowing; he fed well; and the next morning he was perfectly recovered." (p. 57.)

MEDICAL GAZETTE.

Friday, February 9, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

NEGLECT OF THE INSANE POOR IN SCOTLAND.

A LETTER on this important subject was published not long ago in the Dumfriesshire and Galloway Herald, and has since been reprinted in a different form. The letter is anonymous; but we have been favoured with the name of the writer, who is a physician, and the author of a well-known treatise on insanity.

The enactment of a poor-law for Scotland is now shortly expected; and never was there a land for which a poor-law was more wanted. From our comments on Dr. Alison's valuable works, our readers will have learned how very little is done for the indigent in Scotland. In short, no country ever existed which demonstrated more clearly the fallacy of the theory, that private charity can supply the place of a public provision for the poor. Nor is this proved only by the crowded wynds of Edinburgh or Glasgow, with their hordes of human beings rotting in a state below beggary; for the most secluded villages betray a similar spectacle to the inquirer—misery swept out of the way, but not relieved. The female field labourers, says Mr. Chambers, being unable to work after about 50, "inevitably become destitute, and depend, for the remainder of their lives, on the charity of their neighbours, or parochial allowance; the parish rarely offers to such persons more than 1s. per week. Individuals occasionally give them some scraps, but this succour is very trifling; the only chance for such persons seems to be an acute illness, for then some little attention is paid them."

Those who are acquainted with the appalling facts revealed by Dr. Alison will scarcely be startled by those contained in the Dumfries letter. They harmonize so well together; the chords that vibrate so feebly to the sufferings of the sane are equally sluggish to the sufferings of the deranged.

From the returns drawn up by the clergy in 1818, it appeared that there were then at least 310 lunatics in the

ounties of Dumfries and Wigtown, and the stewartry of Kircudbright; and 198 of these were at large. A later document, dated in 1831, states the total number of lunatics at 333.

Now, the two hundred who wander unrestrained are injurious in various ways to the public weal, and even infringe on the public safety. Some commit murder; some have the aspect, as well as the instincts, of satyrs; and others are worried into fury by the boys of their native villages. They thus teach that most undesirable of lessons, an indifference to the sufferings of others; until those who once sympathized with human pain become callous by habit, and learn to jest, as it has been beautifully expressed, in the sacred presence of misery. "Davie Gellatly must not be taken as a type of the race. They are no longer regarded with superstitious awe or forbearance."

In England, as we all know, every lunatic has his settlement; and should he unfortunately belong to a county which has no county asylum, he will be sent at the expense of his parish to a private one, or, at worst, he can claim a refuge in a workhouse. In Scotland, the law does not protect him until he commits some crime; he is then sent to a jail, or an asylum. Many lunatics, no doubt, are under the care of friends or relations; but, unfortunately, this is sometimes a very frail safeguard: insanity too often dissolves every tie of nature, and the relation is forgotten in the lunatic.

"Within a short period," says our Scottish fellow-labourer, "I have seen a maniac who, bound and galled, and cut by his bonds, had been crushed and confined in a small hole beneath a stair; where, although deprived of every means to inflict injury, and dependent on those who had shorn him of his former powers and privileges, he was shunned by his relatives as the plague-stricken were formerly shunned. I know that at this moment there are lunatics immured in cellars, closets, lofts," &c.

In another case, a woman was locked up for nine months in a garret, deserted by those who had slept in the same cradle, and with her bed unchanged for weeks. Dr. —— gives nine instances of grievous neglect or oppression occurring in a country town somewhat smaller than Dumfries, and collected in 1840. Here is one of them.

"A woman, still very young, has become completely paralytic in her limbs, from having been heavily ironed by her parents during a period of at least ten years."

He also shows that justice to the insane would be the truest economy. If left without treatment, nine-tenths of indigent lunatics will become chargeable for life as "impotent poor;" while, if properly treated, at least one-third will recover. We blush to think that it should have been necessary to use such an argument; and we should have been glad to leave it understood in the general formula, that the right is always the expedient; but since the *argumentum ad crumenam* reaches ears that are deaf to all others, it was perhaps as well to employ it.

As a remedy for these crying evils, he proposes to enlarge the present asylums at Edinburgh, Glasgow, Aberdeen, &c., thus saving the expense of new sites, and a fresh medical and domestic staff. But could the duties of these officers be doubled, with advantage to the insane and themselves? We doubt it. The common fault in hospitals, whether general or special, is, that each physician has too many patients; he sees the cases, indeed, but can hardly study them.

We therefore hope, that, wherever the existing asylum is already so large that additional wings would be a burden, a new one will be built for this formidable variety of human distress.

If justice and pity demand a poor-law, mere shame should be sufficient to extort a provision for lunatics.

SECRETS OF A UNION WORKHOUSE.

We do not know whether the workhouse of the Nacton Union, in Suffolk, is worse managed than other similar establishments; or whether this house has merely had the ill luck to shelter a poor man not afraid to disclose the secrets of his prison-house; but certain it is, that this receptacle has come out of a recent investigation with a very shattered character. It seems that Thomas King, formerly a schoolmaster in other Unions, but lately a pauper in this workhouse, addressed a letter, on the 18th of January, to Mr. R. N. Shawe, Chairman of the Board of Guardians, desiring to be allowed to substantiate seven charges against the authorities of the workhouse. A copy of this letter having been transmitted to the Poor-Law Commissioners, they sent down Sir John Walsham, an Assistant-Commissioner, to investigate the case on the spot. The inquiry lasted three days, and the upshot of it was, that the Commissioners thought that the charges against the chaplain, surgeon, governor, matron, and porter, had not been substantiated, but that those against the nurse were established beyond all doubt.

One of the charges proved against her was that of causing a patient named Haggard to be tied down in his bed on the night he died. King stated that "the deceased, who was 76 years of age, was put in the sick ward on the 12th of January. The old man got out of bed several times in the night, and as he was very feeble, King and other patients assisted him into bed. There was neither fire nor candle in the ward. King called the nurse, and told her that the bed-clothes could not be kept on the patient. The nurse said, 'I'll manage him this time, so that he shall not get out of bed any more.' King said, 'Why, nurse, the man is dying; you had better sit up with him;' to which the nurse replied, 'No, I'll manage him.' She then got a piece of rope, or window sash line, and asked King to assist her in tying the old man down in bed. The rope was passed round the bed-rail on either side, and over Haggard's body, in which state he was left. One of the paupers said, 'It would be better that you put it round the man's neck at once.' King went to the bedside early next morning. The man was then dead and cold."

King's testimony was corroborated by two paupers, one of whom gave as a reason for not complaining to the governor, that he had been told it was the rule of the house to tie patients down in bed, when troublesome. Another pauper mentioned the names of four patients who had died in the night under similar circumstances, not tied down with ropes, indeed, but unnursedand untended. Another case, which, if correctly stated in all its particulars, would be a dark one indeed, is that of Garrod, a patient eighty years of age, who died of abscess of the kidneys.

Not to mention other instances of alleged neglect, he appears to have lacked even clean linen. The regular visiting days of the surgeon occur only twice a week. We hope that his assistant attends on the other five; for it is so obvious that an infirmary requires the daily visit of a medical practitioner, that all argument is needless on the topic.

We will mention only one more anomaly in this house of irregularities. The assistant nurse, Ann Davis, who is frequently mentioned in the evidence, is imbecile; so much so, indeed, that, though called as a witness, she was not examined, owing to her deficiency of intellect.

Sir John Walsham condemned, in the most emphatic terms, the practice of tying patients in their beds; and censured the employment of a girl of weak intellect as nurse, adding that the doing so in the men's wards was indecent. Although he exonerated the governor and matron from the suspicion of having sanctioned the conduct of their subordinates, he thought they were indirectly culpable, in not having paid closer attention to it.

Mr. Shawe, the chairman, was not satisfied with the governor, and asked if dying men were to be left without any to sit up with them? "Nothing could justify such negligence."

In a word, though the breath of censure ruffled several other persons, the nurse alone will be the scape-goat for the rest.

She was unable to trim the balance with such nicety, as to keep up all the rigour of the workhouse test on one hand, and save appearances on the other. The whispered severity of her betters in her became open unfeelingness, and she will be sacrificed for carrying out their system.

The miser in "Old Mortality" thought a dipped candle good enough to die by, and this unfortunate nurse probably surmised, that, in the opinion of the board, a sick ward, without fire or candle, was good enough for the last hours of the poor of the Nacton Union.*

LECTURE

ON THE

CASES IN WHICH IT IS EXPEDIENT TO PERFORM THE OPERATION FOR THE

REMOVAL OF SCIRRHOUS TUMOR OF THE FEMALE BREAST,

Delivered in the Theatre of St. George's Hospital, January 24, 1844,

By Sir B. C. Brodie, Bart.

Gentlemen,—If a scirrhous tumor of the female breast be left to take its own course it gradually increases in extent; it contaminates the neighbouring textures; it finally ulcerates, and in the greater number of cases the patient's life is terminated in three or four years from the commencement of the disease. Not only is life terminated thus early, but death is preceded by a most painful state of the ulcer. It is disposed to bleed and to slough, and the patient is rendered miserable. There is not a much worse way of going out of the world than that of being destroyed by this disease.

Looking at these facts alone, you would say there is no doubt that the proper thing to do is to remove the tumor by an operation. But then there is another order of facts to be taken into account. We find that in the larger proportion of cases in which the operation is performed, the patient is not alive two or three years afterwards; and in a great many cases, instead of the operation stopping the disease, it actually seems to hasten its progress. We find, besides, that the operation in itself is not in all cases free from danger.

These different orders of facts have led different surgeons, accordingly as they have looked at one or the other of them, to come to different conclusions as to the propriety of the operation. The late Mr. Cline, for example, and Sir Everard Home, both men of great experience, would scarcely ever consent to the removal of scirrhous tumors of the breast under any circumstances; whereas I have known other very experienced surgeons who were in favour of an operation, even in the great majority of cases. And not only has there been this difference of opinion between different individuals, but I have known the opinion of the same individual to differ at various periods of his life. I remember a very distinguished surgeon saying to me that he thought he would never perform this operation again, and yet that very surgeon, some three or four years afterwards, recommended the operation in a case in which I thought that it would fail. This discordance of opinion only shows the difficulty of the subject; and if this difficulty has stood in the way of men of great experience, it may well stand in the way of you who are beginning your career. Hence, it appears to me, that it may be of advantage to you if I offer some observations on the subject, and endeavour, as far as I can, to clear away the doubts which may arise in your minds as to the expediency or the inexpediency of the operation.

This, then, is the subject of the present lecture:—Under what circumstances is the operation for the removal of a scirrhous tumor of the breast proper, and under what circumstances is it improper?

I should observe here, in the first instance, that while a great deal depends upon the

* We are indebted for the account of this inquiry to the Times of February 5th, 1844.

nature of the case, something will depend upon yourselves, and upon the mode of performing the operation. If there be a scirrhous tumor imbedded in the gland of the breast, and you remove the tumor and a piece of the breast in which it is imbedded, and leave the rest of the breast, according to my experience the disease is quite sure to return; and this corresponds to a rule which applies to all cases of malignant disease—that you have no security from an operation for its removal, unless you remove the whole of the organ in which the disease is seated. If, for instance, there be *fungus hæmatodes* of the bone of the leg, the patient may have some chance of doing well if you amputate the thigh above the knee; and if there be malignant disease in the femur he has almost no chance, unless, indeed, you think it worth while to take out the thigh-bone at the hip-joint. I say, therefore, that in cases of scirrhous tumor of the breast, where the tumor is actually imbedded in the breast, if you perform the operation you must remove the whole of the breast. You may imagine that this is a very easy thing to be done, but it is not so easy in reality: for in amputating the breast, you will be very apt, in a thin person, if you are not very careful, to leave small slices of the gland of the breast adhering to the skin, and I have no doubt that the part or parts thus left behind in some cases form the nidus of future disease. The colour of the gland of the breast is very little different from that of the surrounding adeps; and the blood that flows adds to the confusion. To avoid the error in question, you must be careful in the dissection to keep the knife near the skin, not near the breast; and, further than this, in every case when you have taken out the tumor, you should look at its surface, and see that it is every where covered by healthy adeps. If it be not, then examine the inside of the flap of the skin, and see whether any small portion of the breast has been allowed to remain there.

So far, I say, the success of the operation may depend mainly on yourselves: but now let us consider what are the circumstances, independently of anything that you do, that may lead you to think there is no chance of the operation leading to an ultimate cure; and what are the circumstances that would lead you to hope that the result may be more favourable.

First, you may divide scirrhous tumors of the breast into two classes—one where there is a conversion of the gland of the breast itself into the scirrhous structure, there being no well-defined margin to it; the other, where there is a scirrhous tumor imbedded in what appears like a healthy breast, as if it were altogether a new growth, there being a well-defined boundary to it.

In the first order of cases, where the tumor has no distinct boundary, and where it is the conversion of the gland of the breast into the diseased structure, the operation not only never succeeds in making a permanent cure, but it rather hastens the progress of the disease. The patient dies within two or three years, and probably much sooner, from an effusion of fluid into the cavity of the pleura.

Then, where the skin is contaminated, there is no chance of the operation making an ultimate or permanent cure. The skin may be contaminated in different ways. Scirrhous tubercles sometimes form in it here and there, at some distance round the tumor, the intermediate portions of the skin appearing to be healthy. Here an operation will never lead to a cure, for you cannot remove all the contaminated skin. Where the skin is thus affected, generally the progress of the disease is very rapid, and the patient dies in a short time, from effusion of serum into the chest. But the skin is often contaminated in another manner. It is thickened and brawny; the pores seem enlarged, as if you were looking at them through a magnifying glass, and you cannot pinch it up between your fingers as you can healthy skin. This is a very bad form of the disease. I have known the operation performed in two or three such cases, and the disease has always returned in the cicatrix directly, and the operation has appeared to hasten rather than to retard the fatal result. It does not matter how small an extent of skin appears to be thus contaminated; if any portion of it be in that state the seeds of disease are in the skin in the neighbourhood, and the knife divides what is apparently healthy, but what is not healthy in reality.

One effect of a scirrhous tumor of the breast, in a great number of cases, is to cause a contraction of the lactiferous tubes which pass from different parts of the head to the nipple; and this contraction of the lactiferous tubes causes a drawing in or retraction of the nipple. This retraction of the nipple, I believe, is to be regarded as very unfavourable to the ultimate success of an operation; for when the nipple is retracted the disease seems always to have extended to the skin in the neighbourhood, and if you examine it very carefully you will generally find manifest indications of disease in it.

Then, in many cases of scirrhous tumors of the breast, the skin is drawn in over the tumor, so as to produce the appearance of a dimple in it. Where this dimple in the skin exists you may be almost sure that there is a scirrhous tumor in the breast beneath it, and on examination you will feel it with the finger. I believe this dimple of the skin over the tumor to form a very great objection to the operation, so that

there is little or no chance of a permanent cure. But, on what does the appearance of the skin depend? I have carefully dissected the parts in a case of this kind, and I will tell you how it is produced. There is a small elongation of the disease passing up from the tumor through the adeps into the skin, a sort of scirrhous filament, half an inch, or a third of an inch, or a quarter of an inch in length. In fact, the dimple indicates that the disease is not confined to the breast, but that the skin is already contaminated.

Then, as the disease goes on, it contaminates the glands in the axilla. The glands in the axilla, if the breast be inflamed, may be inflamed and enlarged, as glands may be inflamed and enlarged from a boil or other inflammation in the neighbourhood. But when there are indurated glands of the axilla, independent of inflammation, you may be sure that there is the same disease in these that there is in the breast, that the axillary glands are contaminated, and that there is no ultimate cure to be expected from an operation.

You may say, "But remove the diseased glands from the axilla." I have done this, and seen it done, and I will tell you what invariably happens. Perhaps you have discovered only one enlarged gland in the axilla; you have determined to remove it, and when you have got into the axilla, you find other large glands contaminated in the same manner, though of too small a size to have been perceptible through the skin before the incision was made.

I need hardly tell you that if the scirrhous tumor adhere to the parts below—to the pectoral muscle and to the ribs, or if the skin be ulcerated, there is no chance of a permanent cure from the operation.

You will find patients sometimes, who, while they have a scirrhous tumor in the breast, have indications of the same disease, or some other form of malignant disease, in other organs. One patient may have signs of malignant disease of the liver; another, of the lungs; another, of the uterus. Of course, if there be any suspicion of the same mischief going on in internal organs, you will know that no permanent cure is to be expected from the removal of the diseased breast.

These circumstances, then, are sufficient to forbid an operation with a view to an ultimate cure; but you must also take into account the state of the patient, her age and condition in other respects: for instance, if an old woman has a scirrhous breast in a quiet state, you would never think of amputating it, because she may die first. The disease may outlast her.

Now, having taken away these cases, you will find in practice that there are very few left in which you will think right to offer an operation, as affording a chance of permanent cure. What are the cases, then, in which the removal of the breast is proper? Where the skin is perfectly sound; where the nipple is not retracted; where there is no dimple in the skin over the tumor; where there is no diseased gland in the axilla; where there is no sign of internal mischief; where there is no adhesion of the breast to the parts below; and where the patient is not very much advanced in life: in a case where this fortunate combination of circumstances exists, I should say that there is a reasonable chance of an operation making a cure.

Still, I do not mean to say that in *all* these cases there will be a permanent cure,—far from it; but there will be, in *some* instances. The chances of it in such a case as I have described may be sufficient to warrant you in recommending the patient to submit to the operation; and I have the satisfaction of knowing several persons on whom I have performed the operation under these circumstances, who are now alive and well, and who otherwise would certainly have been dead long ago. So long since as 1832, I removed a breast affected with a scirrhous tumor, and the lady is still alive and well—at least she was so last year. Since the operation she has married and had children. Last year I was called to see a lady on account of another complaint, on whom I performed the operation as long ago as 1830, and there she was, still alive and well.

But besides such cases as I last described, there are others in which the operation for a scirrhous tumor connected with the breast may be performed with a still better prospect of success. A hard tumor sometimes forms on the surface of the breast, which feels like scirrhus, and on cutting into it, it looks like it; so that I can give the disease no other name. It appears to be unconnected with the breast; but when you remove it, you find that it is attached to the surface of the gland, just at one narrow corner. I have removed three tumors of this kind, leaving the breast uncut except where I separated the tumor from it; and in each of these three cases the patient was alive and well a considerable time afterwards. Indeed, I do not know that in any one of them there has been a return of the disease.

Again, a scirrhous tumor may occur in the nipple; and I believe that this may properly be distinguished from a scirrhous tumor of the breast itself, and that there is a greater chance of a permanent cure from an operation where the disease originates in the nipple, than where it originates in the breast. There was a lady who had such a tumor of the nipple. She consulted several surgeons

about it; and as the disease was in a quiet state, it was recommended that it should be let alone. After some time she came to London, and was under the care of the late Mr. Rose, who was a surgeon of this hospital; and I saw her with him. The tumor was still confined to the nipple, and had been going on for some years without coming to any harm; but it was now making progress. We agreed that it should be removed. Mr. Rose removed the breast, which appeared sound, the nipple alone being diseased. She recovered, and was alive and well many years afterwards. A lady consulted me concerning a scirrhous tumor of the nipple: at least I call it scirrhous, for it presented all the characters of that disease. It was as hard as scirrhus, and it had ulcerated. The breast itself seemed to be sound. She was a stout elderly lady, with an enormous breast, and a great deal of adeps over it. The removal of the whole breast would have been a frightful operation, and it is more than probable that her constitution would not have borne it. She was suffering great pain from the disease. I applied chloride of zinc, and afterwards the caustic potassa, till I destroyed what appeared to be the whole of the disease of the nipple. This was three or four years ago. The wound healed, and the patient is alive and well at this moment. The two last orders of cases are, then, to be especially distinguished from those of which I have spoken formerly.

But here another question arises. Is there no other reason for performing the operation for the removal of a scirrhous tumor of the breast, than the hope of making a permanent cure? May it not be worth while to perform it sometimes to give the patient a respite—to relieve her from present suffering, or with a view to prolong life for a limited period? Undoubtedly it is; and I will mention to you some cases illustrative of this observation. There was a lady about 40 years of age, who had a scirrhous tumor of the breast, and there was a cluster of diseased glands in the axilla. When she came to me the skin over the tumor appeared to be on the point of ulceration, so that the disease was going on to great mischief. I said to her, I am afraid the operation will not make a permanent cure, and I cannot recommend it. She asked whether I had anything better to offer; and I could not say that I had. She went away, but in two or three weeks came again. She then said that she had consulted two or three other surgeons (whose names she mentioned), and found that they were all of the same opinion. But she added, "I now come to beg a favour; and that is, that in spite of these opinions you will remove the breast." I asked what her reasons were, and she said, "I am in these circumstances: I have a daughter 18 years of age, an only child. I know that I shall not survive very long; but it is a great object to my daughter that I should live to be her friend and adviser for two years longer. It is for this reason, and this only, that I wish to take the chance of an operation." There was no withstanding such an appeal as this, and I removed the breast, but never thought of touching the glands in the axilla. There was no distinct return of the disease in the cicatrix, and the glands in the axilla did not greatly enlarge; but at the end of two years she was seized with symptoms of disease in the chest; there was an effusion of fluid into the pleuræ, and she died. I may take this opportunity of mentioning, that this is the most common way in which scirrhous tumors terminate life. Little miliary scirrhous tubercles form in the lungs, and then there is an effusion of fluid into one or both of the pleuræ. There was a lady who came to me with scirrhous tumor of the breast. It was small, and so also was the breast, and I should have recommended the operation, but that there were two or three hard and large glands in the axilla. I said to her, you have not much suffering, I cannot recommend an operation; let it alone. A year after she came to London again. The tumor had now ulcerated, the glands had much increased, the ulcer produced excessive suffering, so that she was miserable. I did not remove the tumor with the knife, but I applied the chloride of zinc, and destroyed it. The sore healed. Some seven or eight months afterwards there was a tubercle formed in the cicatrix, which ulcerated like the former one, and I destroyed it in the same manner. She was enabled to go on with great comfort, in fact suffering very little, except at the time when the chloride of zinc was applied. At last, after the lapse of a year and a half, disease was established in the lungs, effusion took place into the pleuræ, and she died in consequence of it. There was a lady who had a large malignant tumor of the breast: it was not exactly scirrhus, but approaching to it in its character; and I did not think that an operation would lead to a permanent cure. By and bye she came to me again, and now the tumor was very much enlarged. The skin was ulcerated, and the ulcer was horribly painful, so that her life was truly miserable. I said, I am afraid you will not get a permanent cure; but, suffering as you are, it is worth while to have the breast removed in order to relieve your present misery. The breast was accordingly removed; it was of a very large size; there was a very broad wound, with a great deal of bleeding; but

she recovered, and continued well upwards of three years. She had then some abdominal disease, and a tumor was felt in the belly, which I conclude was of the same character as the one in the breast. When I last heard of her she was supposed to be dying, and I imagine that she is now dead; but she was relieved of great suffering, and lived three years longer than she would have lived if the operation had not been performed.

I may mention another case. A lady came to town with a large tumor in one breast. There was a fungus protruding, and in the centre of the fungus there was an opening, through which a probe could be passed to the bottom of the tumor. There was also an enlarged gland in the axilla. Sir Astley Cooper saw the patient with me, and as she was suffering a great deal from the ulcerated tumor, we agreed that she should have the breast removed, not expecting a permanent cure, but merely a relief from her present distress. The breast was removed, the wound healed, and she had no return of disease in the breast; but a year afterwards her physician in the country wrote to me, saying that she had symptoms of some malignant disease going on in the chest. She died of effusion into the pleuræ. There was another lady with an ulcerated scirrhous tumor of the breast, which was so painful as to make her life miserable. I told her that I could not promise her a permanent cure; but as she was suffering miserably, she might as well have the tumor removed, nevertheless. She did so, and she lived in comfort for many months.

There may be, then, cases in which you are justified in performing the operation for the removal of a scirrhous tumor of the breast, not in the expectation of a permanent cure, but to obtain a respite for the patient and relief from present suffering. But here you must use some discrimination; for, if the skin be actually diseased, I cannot advise you to have recourse to an operation; the disease returning in the cicatrix so soon, that the patient will get not even a respite from it.

There is still another circumstance to be taken into the account when you come to give an opinion as to the expediency or inexpediency of an operation. Is there any danger in the operation itself? It is commonly said that this is not a dangerous operation; but I can appeal to the experience of all surgeons who have had much to do with it, whether they have not known persons die from it, and whether it be always free from danger? I know that it is not. I have myself lost patients after the operation, and every surgeon has had the same misfortune. Here I think that *something* depends upon the mode in which you perform the operation, and manage the patient before and afterwards; while a great deal depends upon circumstances not under your control. First, you should take care that there is as little hæmorrhage as possible at the time of the operation. Never believe those who stand by at any operation, and say, "the patient has lost no more blood than will do him good." Hæmorrhage during any operation is a great evil, and is one of the chief causes of failure: not that the patient dies directly of hæmorrhage, but indirectly. It lays the foundation of erysipelatous and of venous inflammation, and other mischief, some time afterwards. Then take care not to keep the patient very low before the operation. What used to be termed preparing for an operation by low diet is always wrong. The patient need not be stuffed and crammed before an operation, and she should have her bowels emptied; but as to repeated purging and very low diet, that is not right either before an operation or after it. An operation is a shock to the system, making a great demand upon the vital powers; and if you take away whatever stimulus and food the patient is accustomed to, the constitution probably will not bear it. So far, I say, the success of the operation is, to a certain extent, under your control; but then there are circumstances that are unfavourable, but which you cannot influence. For instance, in a large fat woman with an enormous breast the operation is frightful. There is an immense wound, and there will probably be great hæmorrhage in spite of all your care. An old woman will not stand the operation like a person less advanced in life. You are to look upon an operation, especially if there be a large incision, in an elderly person, as always attended with a certain degree of danger; and so it is when the patient is of a delicate and fragile constitution. For example, those women whom you meet with frequently in private practice with an hysterical nervous system, a small pulse, and cold hands and feet, are always unfavourable subjects for operations, especially for those that are attended with even a moderate loss of blood. In such women as these you are to avoid an operation if possible. But where the breast is small, where the patient is otherwise healthy, and not much advanced in life, and where you do not starve the patient either before the operation or after it, and are also careful that there shall be as little loss of blood as possible, there the danger of the operation is comparatively trifling.

I have spoken of the operation for the removal of scirrhous tumors of the breast; but the breast is liable to other malignant diseases, and the observations which I have just made apply to these cases as well as to

the others. I think, however, that where the malignant disease of the breast has the form of fungus hæmatodes, the chance of ultimate success is even less than where the disease has the form of scirrhus. Fungus hæmatodes is a worse form of malignant disease than scirrhus; and in most of the cases of it which I have seen in the breast, where the tumor has been removed by operation, the patient has always died in a short time afterwards of disease of the lungs and effusion into the pleuræ. But, after all, I believe that these are essentially the same disease, whether assuming the form of scirrhus, or fungus hæmatodes, or pancreatic sarcoma. Whatever may be the names given to them by pathologists, you may be assured that malignant diseases are all nearly related to each other, and that the remarks which I have made respecting the one are applicable to the rest.

I will mention some cases to illustrate this last observation, which I think it is of importance in practice that you should not forget. There was a woman who had a scirrhous tumor of the breast; there was that brawny condition of the skin which I have already described, as indicating a very bad form of the disease. The whole of the skin was converted into a scirrhous tumor, so that the tumor of the breast was scarcely to be distinguished under it. She had also some disease of the liver, and there was a discharge from the uterus. She died, and on examining the breast there was a scirrhous tumor well marked; but in the liver there was a tumor having well-marked characters of fungus hæmatodes or medullary disease; and in the uterus there was an excrescence of that kind which the late Dr. John Clarke described as cauliflower excrescence of the uterus, and which he regarded as an incurable malignant disease of that organ. So that these three diseases, all malignant, and to which different names have been given by pathologists, were all associated in the same individual. The preparations showing them are in the museum. Here the different diseases all coexisted, but I have seen them occur in succession, and I will mention a case in point. When I was a young man, I went with Sir Everard Home to perform a private operation. It was in the case of a lady from the country, who had a tumor apparently in the abdominal muscles. Sir Everard removed the tumor, and when we came home and examined it we found that a portion of peritoneum adhered to it, and that it was a plain case of scirrhous tumor. The wound healed very well, and the lady went out of town. In the course of a little time, however, she again came to London, with another tumor formed in the cicatrix. She again put herself under Sir Everard Home. The tumor was larger than the one he originally removed, but he removed it as he did the former one. It had no longer the characteristic structure of scirrhus, and I can only describe it by saying that it was like the fibrine of the blood, without colour; laminated; something like the buffy surface of a coagulum of blood drawn during inflammation, and very slightly organized. The wound healed, but by and bye a third tumor formed in the cicatrix, and she again came to London. It seemed not worth while to remove the tumor a third time. It increased in size, and occupied a great part of the belly. She died, and it fell to my lot to examine the body. The tumor was entirely different in appearance from either of those that had been removed. It was a regular brain-like or medullary mass, or a tumor of fungus hæmatodes. Hence, in the one case three different kinds of malignant disease existed in the same individual at the same time, and in the other they showed themselves in succession. You may sometimes remove a tumor from the breast, in one part of which you have one structure, and in another a different structure.

There is a circumstance which I ought to have mentioned in an earlier part of the lecture, but which I accidentally omitted, and which ought always to be taken into account whenever you are in doubt as to the expediency of the operation. It is very true that a scirrhous tumor of the breast will generally terminate the patient's life, if left to itself, in three or four years, but very often it lasts much longer. I remember a lady of fashion who had a scirrhous disease of the breast; who lived in the world, and nobody knew anything about it for several years, I believe ten or fifteen. I remember another lady who had a scirrhous tumor of the breast twenty-five years, and she died at last, not from the disease of the breast, but from effusion into the cavity of the chest. If you are doubting about the expediency of an operation, and the disease be in an indolent state, the recollection of such cases as these, where the patient has lived with a scirrhous tumor of the breast unaltered for many years, should be sufficient to incline you to reject it. The chance of a patient living long with such a disease is not sufficient to make you throw away the chance of an operation, where it is likely to be attended with advantage, but is sufficient to make you decline the operation where other circumstances would lead you to doubt its propriety.

THE COLLEGE CHARTER.

To the Editor of the Medical Gazette.

Sir,

I felt much surprised at the conclusion you arrived at after your recent examination of the new charter of the College of Surgeons; viz. that it cannot be doubted for a moment that it is a prodigious step in the way of improvement.

I should have thought that even the not unfriendly analysis of its provisions exhibited in your pages, must have led to a very different conviction. A more inefficient, complex, contradictory, and inoperable plan for satisfying the wishes of the profession, could scarcely, I think, be devised. Throughout it betrays an unwilling submission to concessions which had become inevitable, and a disposition to hamper them with restrictions and regulations which may render them nugatory. Had the Council of the College met the members of its body in a frank and cordial spirit, and published the heads of any plan they might have been able to contrive, such plan might, by the aid of discussion through the press, the employment of deputations from those interested in the matter, &c. &c. have become, perhaps, satisfactorily matured and practically useful; whereas the present measure, carefully shrouded from observation until expostulation and amendment had become too late, pronounced, even by its well-wishers, to be but a bungling piece of business at the best.

There can be no doubt, I think, that the great body of the members of the College must be, if this new fellowship is to be worth having at all, degraded by the elevation of a fraction of their number to a higher rank, independently of superiority of qualifications; that is to say, such superiority has not been made the test, and cannot be alleged of a great number of those selected. What good object is to be attained by the creation of this body of electors, as Mr. Guthrie, with his usual directness of expression, terms them, I know not. They are too numerous for the same dispatch of business and concentrativeness of action which characterise smaller bodies, while they are not numerous enough to prevent the possibility of sinister or family influences operating among them, and certainly not enough to be entitled to be considered as expressing the voice of the profession in reference to candidates submitted to them.

But why this system of indirect expression at all? It can scarcely be pretended that the same arguments which are used in reference to universal suffrage in the political world will apply to it in medical affairs. The profession is not a mob, but consists of a large number of persons who are, or should have been before the diploma was granted them, educated gentlemen, and who are fully alive to the professional merits of their brethren, and upon all occasions willing to testify to the same, and to whom, I contend, such opportunity of testifying can alone be justly assigned.

I cannot agree with those who approve of the selection of Fellows which has been made. It would have been hard indeed, with the whole profession to choose from, if some or many well-known men had escaped cognizance; but we have the right to complain of the almost utter absence of the names of general practitioners of eminence. It is replied—a leading rule laid down for the selection was the inclusion of every surgeon and assistant-surgeon of a recognised hospital, and every lecturer or demonstrator of surgery and anatomy at every school; and that this necessarily swallowed up a large portion of the 300. Of course it did, and any such basis of selection is very unsatisfactory, and should never have been laid down; for every one knows that the election to sugeoncies and lectureships is too frequently effected through family and other influences, and is often but little proof of excellence. And although the most eminent names of our own and former times have and do grace these offices, yet others are filled by men of a very common-place description, in no wise entitled to elevation at the expense of their brethren. The test you lay down yourself, Sir, is a better one, although I am at a loss to know how you have discovered its application, or what assurance we have in future for its realization. Your words are, "The Fellowship is an honour properly held out by the Queen as a reward to those who have *distinguished themselves* either as authors, or as practitioners, or as discoverers, or as men of general science, or of high character and reputation, or long standing in the profession."

Whether some general practitioners might not have been selected in accordance with these principles of selection, I need not ask; but I may observe that even if the proportion of these had been much greater, I do not think the profession either would or ought to rest satisfied with such a measure as this new charter, and that nothing should content them but the admission of a certain proportion of leading members employed in general practice into the Council of the College itself. I can see no objection of the slightest weight to this arrangement, while it would assuredly assuage much of the heart-burning ill-will now prevailing. The objection on the score of pharmacy is idle, for every one knows that a general practitioner of any eminence is never engaged in

the actual practice of pharmacy, which is entirely managed by his assistants and apprentices; while an acquaintance with its principles must surely be advantageous to any one engaged in the art of prescribing, and would, I feel sure, be of great utility to some of our present surgeons, would they condescend to acquire it. This I can hardly expect, since they require not only that a member of their Council shall not be engaged in the practice, but shall be also in condition to shew that he has sufficiently purified himself therefrom by a five years' quarantine. The prohibition against midwifery you have animadverted upon; and I can only express my utter astonishment that a body so enlightened as the Council, containing men who have so eloquently advocated the indivisibility of the science of medicine, and others who have practised all its branches, could consent to promulgate so foolish a decree, and that with the experience of the benefit accruing to the College of Physicians from the repeal of such an enactment. If the surgeons of the present day are determined to restrict their honours to the operative branch of medicine, they are certainly less particular as regards their own practice, for I am, at least, unable to define the case they would refuse their attentions to.

I believe, then, Sir, the interests of the profession would be best consulted if the Council of the College consisted of a much larger number of persons, say 50 or 100, general and provincial practitioners, in certain proportions, being eligible; the ordinary business being performed by committees residing in London, as at present for the library, museum, &c.; and that each member of the College should have the power of voting at every vacancy.

If, however, an order of Fellows is to be created, it should be accessible, as suggested by Mr. Guthrie, to any one of the profession who chose to undergo the additional examination, and pay an additional fee, for I cannot see the policy or justice of not demanding a fee for the Fellowship, if it is to be retained for the Membership, as it undoubtedly should be.—I am, sir,

Your obedient servant,

JOHN CHATTO.

Great Coram Street, Jan. 8, 1844.

TAUNTON AND SOMERSET HOSPITAL.

To the Editor of the Medical Gazette.

SIR,

I AM sorry that my observations on the terms proposed for a surgeon to the Taunton and Somerset Hospital should have offended Mr. Higgins (who stands boldly forward in defence of the office which he holds), or any member of the election committee. I had no intention of impugning the limited circumstances of any medical practitioner, nor of discouraging the zeal of any young surgeon, who, instigated by a laudable anxiety to improve his professional attainments, accepts an office calculated to fulfil his object. My indignation was especially excited by those terms contained in the advertisement for a surgeon which, in my opinion, derogated from the dignity of a gentleman embarked in a liberal profession, and which seemed analogous to those of an upper servant in a gentleman's family. To prevent any farther misinterpretation, my allusion was not so much to the salary of £50 per annum, as to the *classing the surgeon with the matron*, by placing him at her table, *restricting him from practising out of the hospital*, and the offer to *defray the expenses of his laundress!* Now, sir, had the committee, though they limited the salary to an annuity of £50, given him the liberty of private practice, not inconsistent with his hospital duty, and allowed him the privilege of dining in his own apartments, I should have started no objection to an office so desirable; but though the matron may be, and no doubt is, a highly respectable person, the office which she holds being unquestionably menial, should surely exempt a surgeon from the *condition* of commensality; and if the protection from the expense of his washing bills were considered an object for the probable candidate, a further compensation to that end might have been privately awarded, without offending his delicacy by the public offer of such indemnification. The rector of a parish advertises for a curate; and though the salary which is offered may not exceed £50, the curate is not required to sit at table with the housekeeper, nor is he offended by the offer of the gratuitous use of the family wash-tub. The poor ensign of a regiment, or the midshipman on board a frigate, mess with their brother and superior officers. So that, in the other liberal professions, though the salary be humble, or the pay scanty, their station in society is untarnished. I will not, however, trespass at greater length on the pages of your Gazette. I have merely made these observations in defence of a profession of which I am a member—a profession which I lament to say is not properly estimated or respected—and from a repugnance to see any of my colleagues insulted or underrated.

"Ιητρος γαρ ἀνηρ πολλων ἀνταξιος ἀλλων."

I am, sir,

Your obedient servant,

J. C. BADELEY, M.D. Cantab.

Guy Harlings, Chelmsford,
Jan. 25, 1844.

COLLEGE OF SURGEONS.

To the Editor of the Medical Gazette.

SIR,

RESIDING more than a hundred miles from London, and being ignorant of the principle which guided the Council of the College of Surgeons in their recent appointment of Fellows, allow me to suggest, in answer to Mr. Edwin Lee's complaint at being left out of the number, whether, notwithstanding Mr. Lee's numerous publications, the favour he has shewn to the most absurd of the pretensions of *Mesmerism*, in his late "Report on Clairvoyance," may not have influenced the Council in omitting his name?

Were the suffrages of the new Fellows to be taken as to his admission amongst them, I suspect the reason I have mentioned would decide nine out of every ten against his claim.—I am, sir,

Your obedient servant,

ONE OF THE FELLOWS.*

COLLEGE OF SURGEONS.

To the Editor of the Medical Gazette.

SIR,

As you have honoured a letter of mine by placing it in your pages, perhaps you will allow me to offer, on the same subject, a suggestion to the Council of the Royal College of Surgeons of England. I would put it as questions for consideration. Is it not desirable, in various points of view, that the new Fellows which are to be elected before the 14th of September, should know of their election so soon as it has taken place? Is it not desirable that the election should be carried on in chronological order, so that those who are passed over may know it before the expiration of the time allowed, in order that any such who feel themselves competent to undergo the examination for Fellows may without delay take that position in the profession for which they believe themselves duly qualified? There may be many modest yet meritorious members to whom it would be very painful to find on the 14th of September that they are not Fellows of the College, and perhaps some of them far superior to many on whom the honour has been conferred.—I am, sir,

Your obedient servant,

A TWENTY-EIGHT YEARS MEMBER.

January 29, 1844.

* A very distinguished provincial surgeon.
ED. GAZ.

EXTRACTS

FROM THE

Report on the Progress of Anatomy and Physiology in the year 1842-43, by JAMES PAGET, Lecturer on Anatomy and Physiology at St. Bartholomew's Hospital.

Blood.—Concerning the *general constitution* of the blood, MM. Andral and Gavarret, continuing with M. Delafond the observations already made on human blood, have examined that of many domestic animals, and have drawn these conclusions: 1. In the species examined, the principal constituents of the blood are the same, but the proportions of each vary. 2. The highest natural average quantity of fibrin is in the herbivora, the lowest in the carnivora: the energy of constitution has no constant influence on the increase of the proportion of fibrin. 3. Of the corpuscles the highest average proportions are found in the carnivora, the lowest in the herbivora; and in the same species there is always an increase proportionate to the energy of the constitution; and in sheep, to the improvement of the breed. 4. During the first day after birth the fibrin is in very small quantity; the corpuscles comparatively abundant. 5. During the last periods of gestation, both fibrine and corpuscles fall below the healthy proportion; after parturition they increase to more than that proportion. 6. The fibrin (in the domestic animals as well as in man) is always increased in the inflammatory state: the corpuscles are never directly influenced in it. 7. The water of the blood has its lowest average in the carnivora, its highest in the herbivora. 8. Dropsy does not supervene on alteration of the blood, unless from diminution of albumen; excess of water or decrease of corpuscles will not produce it.

Rigor Mortis.—An ingenious paper has been published by Ernst Bruecker, to prove that the rigor mortis is due to the coagulation of the fibrin which is effused from the blood-vessels in the liquor sanguinis for the nutrition of the tissues, (especially of the muscles,) but which at the time of death has not yet been assimilated. The paper is chiefly important for the numerous analogies which it points out between the coagulation and subsequent changes of the fibrin and the contraction of the muscles; analogies of which Mr. Hunter had already illustrated many, and some of the most important. But the explanation of the rigor mortis is rendered improbable by the observations of Mr. Bowman, which I can fully confirm, and which prove that the muscle is rigid, because its fibres, or parts of them, are contracted, and contracted in the same manner as during

life. And some examinations which I have made of the rigor mortis in the involuntary muscles, afford equally strong evidence of its being due in them also to the muscular contraction. I believe that *all involuntary muscles* pass into the continued and fixed contraction of the rigor mortis as soon as they cease to be irritable, and to contract under ordinary stimuli. This may be seen distinctly in many arteries, as well as in the digestive canal and urinary bladder; but the best examples are presented in the hearts of recently slain animals, or of men examined soon after apparent death. As soon as they cease to be irritable, the walls of all their cavities, previously flaccid, gradually become firm and hard, draw in towards the base of the heart, and reduce or completely close the cavities. The heart thus rigid has almost exactly the form and other external characters of the heart when actively contracted during life. It is evident that this form, produced as it is by a drawing up towards certain fixed points of attachment of the muscular fibres, could not be acquired by the mere coagulation of either blood or liquor sanguinis within the tissue of the heart; and the only difficulty in believing that the rigidity of the heart and other muscles is due to a contraction comparable with that which occurs during more active life, must be from the seeming improbability that any tissue should maintain a vital contraction so long after apparent death as during the continuance of the rigor mortis. This difficulty, however, which would in any circumstances be more apparent than real, is almost removed by the facts already quoted from Remak.

Exhalation of Carbonic acid.—MM. Andral and Gavarret state the following as the results of experiments made in sixty-two persons (thirty-six males and twenty-six females), to determine the quantity of carbonic acid exhaled in breathing: 1. At all ages beyond eight years the exhalation is greater in males than in females. 2. In males it regularly increases in quantity from eight to thirty years of age; from thirty to forty it is stationary or diminishes a little; from forty to fifty the diminution is greater; and from fifty to extreme age it goes on diminishing till it scarcely exceeds the quantity at ten years. 3. The quantity of carbon exhaled in the form of carbonic acid in one hour by males of different ages is as follows; —at eight years, 77·5 grains; at fifteen, 135 grains; at twenty, 176·7 grains; between thirty and forty, 189 grains; between forty and sixty, 156 grains; between sixty and eighty, 142·5 grains; and in a man of 102 it was only 91·5 grains. 4. In females the same proportionate increase goes on to the time of puberty, when the quantity abruptly ceases to increase, and remains stationary so long as they continue to menstruate. When, however, menstruation has ceased, the exhalation of carbonic acid begins again to augment; and, then again, in advancing years, decreases as it does in men. Thus before puberty the quantity of carbon exhaled by girls in an hour is ninety nine grains: and so it continues while the habit of menstruation continues; afterwards, from thirty-eight to forty-nine years of age, it increases to 130 grains; from fifty to sixty again falls to 113 grains; from sixty to eighty is reduced to 105 grains; and in a woman of eighty-two, was only ninety-three grains. 5. In amenorrhea the exhalation is always increased. 6. In pregnancy the exhalation is equal to that which is natural soon after the cessation of menstruation. 6. *Cæteris paribus*, the more robust a person is the more carbonic acid is exhaled; but the differences are not great. 7. The maximum of exhalation was in a strong man of twenty-six, who in an hour exhaled carbonic acid containing 218·5 grains of carbon; the proportionate minimum in a weak man of forty-five, who exhaled in the same time only 139·5 grains. 8. The influences of the weights of persons, of the capacities of their chests, and of the extent of the respiratory movements, are not great.

Salivary secretion.—Dr. Budge has found that after extirpation of the parotid, submaxillary, and sublingual glands in a dog and a rabbit, the secretion of saliva continued; its characters remained the same, and no function was disturbed. [The experiments add probability to the opinion that the labial, buccal, palatine, and other glands which the experimenter left behind, are salivary glands.]

A case of a kind of metastasis of the salivary secretion is related by Dr. Roelants, and is interesting in its relation to the general physiology of secretion. A man, eighty-two years old, had an attack of bronchitis, with fever, followed by suppuration around and probably in one of the parotid glands. The abscess was opened, and two months after a large mass of chalk-like substance was discharged. The abscess soon healed, and he recovered his health; but now, whenever he masticates, saliva flows freely from the skin of the cheek and temple of the side formerly diseased. As soon as he begins to eat, the skin becomes very full of blood, and hot; and gradually drop after drop of clear fluid, with all the characters of saliva, collects on its surface, and runs down the cheek and neck, and continues to do so just as long as he continues eating. His health is not disturbed, and the saliva-secreting surface of the skin is natural in its texture.

Composition of the Bile.—Dr. Kemp, by careful elementary analysis of the bile of the ox, has corroborated Demarçay's opinion that it is essentially a true chemical com-

pound of an electro-negative body with soda. But he holds that this body is neither the *choleic acid* of Demarçay, since it is not precipitated from the soda by acetic acid, nor the *bilin* of Berzelius, because it is not precipitated from the soda by carbonic acid. He has therefore given it the name of *bilic acid*. It has a peculiar bitter-sweet taste, and in mass resembles a fine resin. It is soluble in every proportion in water. In a subsequent paper he has shown that a much greater difference than is usually imagined is effected in the bile while in the gall-bladder. Bile from the hepatic ducts of an ox was destitute of the bitter taste of cystic bile; its smell also was different. It chiefly consisted of two different electro-negative bodies, separable by alcohol, and each combined with soda.

Testicles.—Mr. Gulliver has confirmed R. Wagner's observation, that the general enlargement of the testicles which takes place as the period of procreation approaches is accompanied by enlargement of the individual seminal tubes. During winter he finds that the seminal tubes of birds are tolerably thick and strong; but at the season of procreation semen accumulates in them, and their coats are so distended and attenuated that they are very easily ruptured. The same thinning and enlargement of the tubules occurs in the development of the human testicles at puberty.

An interesting case, proving the sympathy of the vital organs with the testicles, is recorded by Dr. Schlesier. A healthy man engaged in a fray in the dark, was suddenly heard to shriek out: he fell in convulsions, and died in five minutes. On examination the only injury found was the rupture of both the spermatic arteries and veins at the internal rings, produced by the scrotum and testicles having been seized and pulled down by one of those with whom the man was fighting.

Spermatozoa.—Facts of much importance in regard to the formation of spermatozoa are furnished by the cases first recorded by Mr. Liston and Mr. Lloyd, and since repeatedly observed, in which these bodies are found in the fluid of common hydrocele of the tunica vaginalis testis, and in encysted hydrocele.

Lactation.—M. Mandl confirms the view of Henle and others in regard to the perfect milk-corpuscles, proving the existence of an external membranous envelope by rubbing the corpuscles between glasses. The oil-globules are set free, and the torn membranes are unrolled and flattened.

M. Raciborski has examined the question of the influence of menstruation on the secretion of milk, and has found that it is unimportant. The only difference between the milk of nurses who do, and those who do not menstruate, is that in the former the proportion of cream is rather less in the menstrual period than it is in themselves in the intervals, and than it is generally in non-mentruating nurses.—*British and Foreign Medical Review.*

STATISTICS IN MIDWIFERY.

By Dr. Metcalf.

The case where *one foot and one knee presented*, being soon converted into a footling presentation, was got along with as far as the head, without difficulty. Here it was arrested, and for a while resisted my utmost endeavours; but, with the fingers depressing the chin, and the exercise of no inconsiderable force, delivery was accomplished in season to preserve the life of the child.

The *breech presentations*, of which there were three, all did well. One of them was attended with the longest uterine contraction I ever witnessed. At its commencement, I was sitting below stairs in conversation with the husband, from whom I was summoned by one of the attendants. On entering the room, I found the patient in strong pain; and, on making an examination, I ascertained that the breech presented, and was rapidly passing through the superior strait of the pelvis. The uterine effort continued without the least intermission, until the delivery was wholly completed. Twenty-five minutes before this I was unable to make out the presentation. It was a fourth labour, and the whole process was accomplished in three hours. From its completion at 8 P.M. until 4 of the clock the next morning, the patient continued very faint; the syncope, at times, being quite alarming. There was a copious hæmorrhage for the first hour or two, but I attributed the faintness more to the rapidity of the labour, and the suddenness of the delivery, than to that circumstance, the patient being of a very full and plethoric habit. In all three of the cases no trouble was met with at the delivery of the head; with a finger in the mouth, and the chin depressed upon the breast, very little force was requisite to finish the labour.

In both cases where the *funis presented*, the child was dead some time before birth. One occurred in a case to which I was not called until some hours after the pulsation in the cord had ceased. The presentation was natural, the delivery was readily accomplished, and the child, which was a male, was found to be a very large one, weighing $11\frac{1}{2}$ pounds. It was the fourteenth child. The other case has already been referred to as the face to the pubis presentation, and was a miscarriage in the eighth month. The cord was found prolapsed at the first ex-

amination, and I was unable to reduce it behind the presenting part after repeated trials. Dr. Smellie says, "when the cuticle is detached, or nearly so, from the body of a new-born infant, it is evidence that the child has been, *for some days*, dead." In this instance the umbilical arteries pulsated strongly for many hours after I was called, and continued to do so until within twelve hours of the birth of the child. The life of the child was also proved by the strong and sensible motions which could be plainly felt through the abdominal parietes; yet, when born, the cuticle was off in many places about the body, and one arm was entirely denuded.

The case of *presentation of the placenta* occurred in an abortion at five months. On coming at the residence of the patient, which was five miles distant, I was told that she had been flooding for some time, and had become very faint. The attendants were very much alarmed, and urged an immediate examination. On complying with their solicitations I found the vagina filled up with what I supposed to be a coagulum; but, a pain occurring at the moment, it was expelled, and was found to be the placenta, completely separated from the fœtus by the rupture of the umbilical cord. A succeeding examination brought on another uterine contraction, and the fœtus was soon afterwards expelled. Pressure upon the abdomen, together with the administration of diffusible stimuli, and large doses of acetate of lead and opium, arrested the hæmorrhage. The patient continued extremely feeble for some days, and ultimately recovered after a tedious and protracted convalescence. This was the fourth time that abortion had occurred to the patient, having, in no one of her former pregnancies, arrived at the sixth month. She has since been delivered of a healthy child at the full time.—*American Journal of the Medical Sciences.*

INFLUENCE OF MENSTRUATION ON THE SECRETION OF MILK.

M. Raciborski, in a memoir lately read to the Academy of Medicine, has sought to establish, by a collection of facts, the influence of menstruation on the general health of nurses and on the secretion of milk. The medical profession has been very much divided on this point; for whilst some think that menstruation does not injure the quality of the milk, and, of course, ought not to be regarded as a reason for a woman ceasing to nurse, others consider the occurrence of menstruation as hurtful to the quality of the milk, and will not permit a woman to nurse in whom the menses are flowing.

M. Raciborski examined with care the milk of seven nurses both during the intervals between menstruation and whilst that flux flowed. He examined its general appearance, its chemical reaction, its density, the relative amount of cream, the microscopic appearance of the globules, their number, diameter, and mode of arrangement, and compared these with the milk of an equal number of nurses who had not menstruated; and, lastly, he inquired minutely into the state of health of the children who sucked the nurses who menstruated. The general conclusions were:

1. Contrary to what has been lately averred, the milk of nurses who menstruate whilst nursing does not appear to differ in its physical quality, its chemical reactions, or microscopic appearance, from the milk of nurses who have not menstruated.

2. The only peculiarity which seems to present itself is, that, in most cases, it is less rich in cream during the continuance of the menstrual evacuation than during the intervals between that flux; and it is to this peculiarity that the bluish aspect of the milk, observed in some cases, ought to be attributed.

3. In respect of the influence of the mother's milk on the infant during menstruation, its supposed inconveniences have been much exaggerated; and a nurse ought never, in any case, to be rejected simply because she continues to menstruate.—*Journ. de Pharmacie;* and *Edin. Med. Journ.*

CLEANING GLASSES PREVIOUS TO MOUNTING OBJECTS.

It is highly essential, before putting any cement or liquid on glass which is intended to bear an object, that it should be perfectly free from "greasiness," and water should flow uniformly over the surface. To effect this, it is usual to have recourse to alcohol, alkaline solutions, or sulphuric acid; but recently the Rev. J. B. Reade has discovered that infusion of nut-galls (which is a solution of tannic acid) answers the purpose equal if not better than any of the preceding.—*London Physiological Journal.*

KING'S COLLEGE HOSPITAL.

To the Editor of the Medical Gazette.

Sir,

My attention has been called to a letter headed "London and Provincial Hospitals," which appeared in your journal on the 19th of January. As the insinuation contained in that letter has remained uncontradicted in either of the two numbers of the Medical Gazette which have since been published, both you and your correspondent must have overlooked a letter which appeared in

the Morning Post on the 6th of January, and a copy of which I therefore now subjoin, with a request that you will, as a matter of justice, insert it in the forthcoming number of your hebdomadal.

Your obedient servant,

RICHARD PARTRIDGE,
Dean of the Medical Department,
King's College.

Feb. 7. 1844.

"*To the Editor of the Morning Post.*

SIR,

WITH reference to a paragraph appearing in the Morning Post of yesterday, and headed 'King's College Hospital—Town and Country Practice,' I have to request that you will give equal publicity to the statement, that it was inserted without the knowledge or sanction of any of the authorities of that institution, and much to the annoyance of the gentlemen whose names have been thus brought before the public. I have since ascertained that the paragraph owed its origin to a feeling of gratitude on the part of a person who had been a patient in the hospital.—I am, sir,

Your obedient servant,
E. C. STEVENS, Secretary.

King's College Hospital,
Jan. 6, 1844."

SIR BENJAMIN BRODIE'S LECTURES.

As our readers well know, we have for several years reported the Lectures which Sir Benjamin Brodie gives at St. George's Hospital. This season the Lancet has likewise done so, and last week, *by missing a Lecture*, and going on to the next in order, it has contrived to get one a-head of us. Nothing would be easier than for us to recover our ground by giving two; but this would interfere with those arrangements by which a correct version of those valuable discourses is secured to the readers of this journal.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, Jan. 25, 1844.

Robert Fowler.

Thursday, February 1, 1844.

Richard Walton, Cambridge.—John Parker, Bridgewater.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, Jan. 19, 1844.

J. M. Howell.—G. R. Nuttall.—F. Harvey.—E. Leclerc.—C. G. Read.—G. M. Tracy.

Friday, February 2, 1844.

F. F. Morgan.—F. S. Rogers.—H. Jacobs.—J. M'Veagh.—W. Lea.—G. R. Woolhouse.—G. M. C. Sannders.—J. P. Scatliffe.—J. Fisher.—W. Parkinson.—G. P. Smith.—J. Wilson.—A. J. Moore.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, January 20, 1844.

Dropsy, Cancer, and other Diseases of Uncertain Seat	85
Diseases of the Brain, Nerves, and Senses	177
Diseases of the Lungs and other Organs of Respiration	346
Diseases of the Heart and Blood-vessels	33
Diseases of the Stomach, Liver, and other Organs of Digestion	65
Diseases of the Kidneys, &c.	10
Childbed	7
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	1
Arthritis	0
Rheumatism	0
Diseases of Joints, &c.	0
Carbuncle	0
Phlegmon	0
Ulcer	0
Fistula	0
Diseases of Skin, &c.	1
Old Age or Natural Decay	96
Deaths by Violence, Privation, or Intemperance	15
Small Pox	18
Measles	22
Scarlatina	42
Hooping Cough	28
Croup	6
Thrush	2
Diarrhœa	5
Dysentery	3
Cholera	0
Influenza	4
Ague	0
Remittent Fever	0
Typhus	32
Erysipelas	4
Syphilis	2
Hydrophobia	0
Causes not specified	3
Deaths from all Causes	1011

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32 *N. Longitude* 0° 3′ 51″ *W. of Greenwich.*

January.	THERMOMETER.		BAROMETER.	
Wednesday 31	from 36 to 33		29·49 to 29·51	
February.				
Thursday . 1	27	35	29·65	29·68
Friday . . . 2	26	33	29·28	29·24
Saturday . 3	25	36	29·63	29·64
Sunday . . 4	28	34	29·44	29·25
Monday . . 5	35	24	29·20	29·21
Tuesday . . 6	22	37	29·26	29·27

Wind on the 31st ult. W. by N.; on the 1st. inst. N.W.; 2nd. N.W. E. and E. by S.; 3rd. N.; 4th, S. by W. and S.; 5th, N.W.; 6th, S.W.

On the 31st ult. snowing generally during the day. The 1st instant clear. 2d, snowing generally during the day. 3d, generally clear. 4th, snowing generally. 5th and 6th, generally clear. Rain fallen, ·395 of an inch.

CHARLES HENRRY ADAMS.

WILSON & OGILVY, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, FEBRUARY 16, 1844.

ON

DIFFERENT FORMS OF GRANULAR DISEASE OF THE KIDNEY.

By J. D. Heaton, M.D.

[Continued from page 564.]

(For the London Medical Gazette.)

Robert Younger, aged 48, admitted under Dr. Williams. A tall man, of spare habit and melancholic temperament. His habits have been temperate; he has lived in a healthy situation, and followed the occupation of a porter, but has been able to procure only scanty support, and insufficient clothing. He has long been a dyspeptic patient, suffering from pain at the stomach and bilious vomiting, which symptoms have latterly become more severe.

He began to be seriously worse than usual about six weeks ago, when the pain and oppression at the stomach after taking food became more severe, and were accompanied with a distressing cough, continuing for some time after his meals; also, he had severe attacks of palpitation, and shortness of breath, which were relieved for a time by taking a small dose of brandy. The bowels have been very irregular; he has observed nothing unusual as to the urine. About a fortnight ago his feet and ankles, and afterwards his legs, became œdematous; but the rest of the body was not affected.

At present he complains of pain under the margin of the ribs, extending across the body in front; most severe in the epigastrium and right hypochondrium. He has a large appetite, but almost any kind of food increases the pain; the tongue is pale, large and furrowed, covered with a thin white coat. The dull stroke-sound of the liver extends unusually low in the abdomen, reaching down to the umbilicus. The bowels are costive. In the chest the respiratory sounds are tolerably healthy, but there is more vocal resonance under the right clavicle than under the left. There is extensive dulness of stroke-sound over the cardiac region, showing considerable hypertrophy of the heart; the impulse, however, is somewhat feeble, and the sounds indistinct, especially at the base; the action of the heart is irregular. He complains of shortness of breath, and occasional palpitation. Pulse 66, rather full and strong, but intermitting. The feet and legs are œdematous, but there is no ascites, nor œdema of other parts. The surface moderately warm and perspirable. He has occasionally a dull pain in the loins, but there is no tenderness. The urine is pale, clear, and copious, slightly acid; its specific gravity is 1010; nitric acid, or the application of heat, throws down a considerable precipitate of albumen.

℞ Hydrarg. c. Cretâ; Pulveris Antimonialis, aa. gr. iij. M. fiat pulvis omni nocte sumendus.

℞ Haust. Sennæ; Infus. Quassiæ, aa. ℥iss. M. fiat haustus omni mane sumendus.

Middle diet.

June 3d.—He has been freely purged by the medicines. Has less pain in the epigastrium, but there is still much tenderness. Most of the symptoms continue as last reported. He complains of much debility.

Sumat. dimidium tantum pulveris et haustûs.

5th.—No great change in the symptoms. His chief complaint is of great debility, and the pain at the epigastrium. The pulse is very irregular; the urine presents the same appearances as before.

℞ Infus. Calumbæ; Aquæ Menth. aa. ℥ss.; Sp. Ætheris Nit. 3ss; Tr. Cantharidis, ♏x. M. ft. haust. ter die sum.

Full diet.

On the 7th, as he was a good deal purged by the senna draught, he was ordered to discontinue this. On the 10th he commenced

taking purgative doses of bitartrate of potash every other morning; the pain at the epigastrium, the dyspnœa, and prostration of strength, were not much relieved, and the state of the urine not changed. To these symptoms, on the 11th, was first added vomiting, with violent retching, even when nothing was contained in the stomach; appetite quite lost; pulse more feeble, and very irregular. As the bowels were not acted on by the bitartrate of potash, he was ordered a common purgative draught, which acted, though not very sufficiently. The symptoms continued unrelieved, the sickness and vomiting being unabated. The matter discharged was a thin glairy fluid, not bitter nor sour. To relieve these symptoms, a draught with hydrocyanic acid, and afterwards a full dose of calomel, were ordered.

On the 14th, the report is, that the sickness and vomiting are considerably relieved, though not altogether removed. A little food was retained this day, though every thing taken for the last two or three days previously has been immediately rejected. The pain and tenderness at the stomach, with a sensation of tenderness, continue. He feels a weight in the head, with giddiness. Epistaxis has occurred two or three times during the last few days. He was ordered to repeat the dose of calomel; and the next morning took a purgative draught, which operated freely: the sickness was much relieved. From this time he began to suffer much from a sensation of oppression and giddiness in the head, with distressing sleeplessness, but with a great desire for sleep; also much dyspnœa, which could not be accounted for by anything observed in the physical examination of the chest. It was thought the dyspnœa might be asthmatic, and half-grain doses of extract of stramonium were given, with the view of relieving the supposed spasm of the air-tubes. This produced some relief, and for a day or two he appeared more comfortable than usual, though still much oppressed with drowsiness, which he could not relieve by sleep. At this time the pulse was about 80, and pretty regular when sitting up; but it was observed that, when the patient lay down, every other pulse became almost imperceptible, so that the number of pulsations seemed reduced one-half. The dyspnœa was most oppressive when lying down; so much so that sometimes he was quite unable to retain the recumbent posture. The dropsy was not reduced, and the urine retained its former characters; but he now was quite free from pain in the loins.

On the 20th, the following change was made in the medicines, with the view of endeavouring to increase the natural secretions of the kidneys:—

Omitte medicamenta.

℞ Spir. Junip. Co. 3ss.; Sp. Armoraciæ Co. ℥xx.; Tr. Digitalis, ℥x.; Decoct. Senegæ, ℥j. M. ft. haust. ter die sum.

The continued sleeplessness seemed to require an opiate, which procured him a tolerable night's rest, followed, however, the next day, by much disturbance of the stomach.

On the night of the 21st he awoke suddenly from sleep, and commenced talking in an incoherent delirious manner; in two hours he became collected; but this was followed by coldness of the surface and rigors, which were relieved by hot water bottles.

℞ Pulveris Antimonialis, gr. iij.; Ext. Belladonnæ, gr. ss. M. ft. pil. ter die sumenda.

These pills seemed to afford him a little temporary relief, but the symptoms from this time gradually became more aggravated. No change was produced by the last mixture in the character of the urine. The dyspnœa became more oppressive, so that he was immediately awoke from any slumber which could be induced, by the sensation of suffocation. It was always increased by the recumbent posture; but he was subject to paroxysmal aggravations, which were very distressing. He emaciated very rapidly; and this, with his constant suffering, gave the face a very ghastly appearance. He was much oppressed with constant nausea and anorexia, and had a very troublesome hollow cough, almost resembling the effort of retching, but without any expectoration.

The dose of cantharides in the mixture was increased, and laudanum added with the view of inducing some sleep; but all the symptoms gradually became aggravated. Creasote, calomel, and other remedies, were tried, to relieve the constant sickness, but with little success.

On the 29th the quantity of albumen in the urine became unusually great, so that the specific gravity was raised to 1013. The œdema of the feet appeared on the increase, but the dropsy was still confined to this part. The other symptoms were not relieved. An examination of the chest at this time discovered some obscure crepitation posteriorly at the base of the lungs, and distinct dulness of stroke-sound under the right clavicle. The pulse at this time was quite regular, feeble, but hard; the sounds of the heart feeble, but regular, and without much morbid character. The bowels being costive, he was ordered again five grains of calomel, and a dose of castor oil; and quarter of a grain of morphia twice a day, to procure him some sleep.

This amount of morphia threw him into a constant doze; and though he desired it, as rendering him less uncomfortable, yet it was thought too much, and it was directed to be given at night only.

From this time he gradually deteriorated till his death. The dyspnœa was generally very oppressive, and he had frequent attacks of violent and continued retching. Generally either very restless, and even sometimes noisy and delirious, or in a soporose state. On the 6th of July the urine was entirely free from albumen, though still retaining the specific gravity of 1010; very abundant, pale, and watery in appearance. On the 8th the albumen again appeared. During the night he rose from bed, and attempted to throw himself out of the window. During the day he was in a soporose state, and passed the evacuations involuntarily; the respiration was stertorous, and completely arrested at intervals, for the space of half a minute. The tongue brown, and quite dry. On the following day he was more wakeful, being quite delirious, though not violent. At one time he complained of strange animals crawling over his bed; at another, he fancied that an evil spirit was placed at his feet. He disturbed the other patients very much by singing loudly during the night. On the 13th, no trace of albumen could be discovered in the urine by the usual tests; and this state continued till death, which took place on the 17th. The urine continued to the last to be passed in considerable quantity (about three pints per diem), though pale and watery, and of low specific gravity. Most of the symptoms described above continued till death. He seemed to die asphyxiated, respiration being very slow and irregular for some hours previously, and the pulse scarcely perceptible.

Inspectio cadaveris post mortem horas 40.—Body much emaciated; feet and ankles alone œdematous.

The *thorax* contained much yellow serum; a few shreds of soft lymph on the pleura of both sides. In the upper part of the right lung, which was attached to the walls of the chest by old adhesions, was a dark-grey circumscribed induration, beneath which was a small empty cavity, having some largely dilated air vesicles around it. In the apex of the left lung, also, was some induration of a similar kind. The base of both lungs was dark-red, and much congested. The left ventricle of the heart was dilated, and much hypertrophied. The anterior lamina of the mitral valve, and some of the chordæ tendineæ, were thickened by a deposit of opaque lymph. The mitral valve was free from disease. The weight of the heart was 15½ ounces.

The *abdomen* contained no serum. The liver was considerably displaced downwards, so as to reach as low as the umbilicus, but was smaller than usual. There was a concavity on the anterior surface of the right lobe, covered with a dense opaque false membrane, of considerable thickness; a similar patch, of smaller size, was on the left lobe. The liver was of a dark colour; its substance was hard, but easily lacerable; weight 2 lb. 3 oz. The right kidney was much atrophied, being not quite two inches long. The capsule was strongly adherent. On removing this, the surface of the kidney was seen irregularly lobulated and granular, the granules being as large as cardamom seeds. Along the convex margin were numerous transparent vesicles. The cortical structure was quite gone, the bases of the pyramids being level with the surface. The substance of the kidney was firm, and of a dark red colour. The left kidney was little reduced from its natural size. The surface was irregular, with granulations of a smaller size than in the right kidney. The general colour was a dark red, but there were patches of a paler more albuminous appearance interspersed. The substance was firmer than that of the right kidney. A group of small vesicles was formed in the surface, near the upper end. The weight of the kidneys, without the capsules, was—of the right kidney, 1 oz.; of the left kidney, 4 oz.*

The whole inner surface of the stomach presented patches of striated and punctuated vascularity, and some ecchymoses of a dark colour. There was some puckering of the posterior part of the lesser curvature; and at this part was a small circular ulcer of the size of a pen. The ulceration seemed to pierce both mucous and muscular coats; it appeared of long standing, and was not surrounded by any increased vascularity; the margins were raised and indurated, and there was much thickening of the coats of the stomach for some distance around. The pylorus was healthy; there was no appearance of scirrhus of any part.

In the *head*, the arachnoid covering the hemispheres of the brain presented opacity following the course of the fissures between the convolutions. There was increased vascularity of the pia mater; in different parts were seen small spots of sub-arachnoid hæmorrhage. There were numerous opaque deposits on the arteries at the base of the brain, projecting like small granulations. In the choroid plexus was some opaque white granular matter, almost like tubercle.

The first object in the treatment was to improve the digestion and promote the action of the liver, for the dyspeptic symptoms were the most prominent at the time of his admission; the probability of success, however, was much diminished by the co-existence of organic disease of the kidneys, and, perhaps, of other organs. Afterwards, tonics combined with diuretics were administered

* A wax model of the kidneys is preserved in the museum of University College.

to promote the secretion of urea, which was very deficient in the urine. The kidneys, however, seemed too far diseased to admit of being stimulated to a more healthy action; the specific gravity of the urine was not raised, though the quantity of albumen was increased rather than diminished, as the cure advanced. The amount of urine secreted was rather above than below the natural standard, yet the œdema of the feet was permanent till his death.

Christison remarks that, except in cases of *diabetes mellitus*, a continued dropsical state, in connection with a large secretion of urine, may be regarded as a proof of the existence of granular disease of the kidneys. He explains the continuance of anasarca with an increased secretion of the watery parts of the urine in this disease, by considering that the tenacity of the blood, from the diminution of its albumen and hæmatin, increases its tendency to transude.

As the disease advanced, obstinate vomiting, with violent efforts at retching, became a frequent symptom, so much so that, in conjunction with the pain at the epigastrium, and occurring in a patient much emaciated and with very sallow complexion, it led to the suspicion of scirrhus of the stomach. Chronic vomiting is, however, a very frequent symptom in granular disease of the kidneys, and may be regarded as such in this case, though it is difficult to say how much this distressing symptom might have been dependent on, or aggravated by, the deep circular ulcer found in the smaller curvature of the stomach on the post-mortem examination. This kind of chronic ulcer frequently progresses, even to perforation, without previously producing any symptoms; at other times, pain, sickness, and many of the symptoms of cancer, are produced by it. The obstinate vomiting was generally best relieved by a full dose of calomel, which frequently will quiet an irritable stomach when all other means prove inefficacious. Some degree of shortness of breath existed from the time of the patient's admission, and this gradually increased till it became a most distressing symptom. The physical examination of the chest did not discover sufficient disease of the lungs to account for the severity of this symptom: it must be referred, in a great measure, to the diseased state of the blood, overloaded with carbon and nitrogen, in consequence of the imperfect action of the liver and kidneys, two of the great excreting organs, and thus throwing more work upon the third, viz. the lungs. It is not, however, easy to give an entirely satisfactory explanation of the dyspnœa which occurs frequently in cases of albuminuria; for, though a frequent, it is not a universal symptom in this disease, even up to its fatal termination, as is shown by the former case of Wilson, where, with more serious disease of the respiratory organs, and in connection with an almost complete suppression of urine, there was very little complaint made of dyspnœa. Stramonium gave some relief to the paroxysms, but the narcotic effect of opium in deadening the sensation seemed of more avail.

As the disease advanced, many of the symptoms of derangement and oppression of the brain, which frequently present themselves in the latter stages of albuminuria, (probably from the circulation of blood poisoned with urea through the brain) began to appear. Great drowsiness at one time, at another time restlessness and various hallucinations were produced, adding greatly to the distress occasioned by other symptoms.

Till the end of June, the amount of albumen in the urine was slowly on the increase; it then much diminished, and at length no trace of it was discovered by the most careful examination. As the quantity of urine, *per diem*, continued much the same, the sp. gr. sunk in proportion to the removal of the albumen, showing that the disappearance of albumen was not to be considered a favourable symptom, as the healthy ingredients did not take its place.

The total cessation of the respiratory movements, sometimes for a full minute, occurring at intervals some days before death, was very remarkable: this did not depend on unconsciousness either in general, or to the sensation of dyspnœa in particular, but seemed the result of inanition; the anorexia and sleeplessness under which he had suffered for some time, having produced a state of emaciation and debility very extreme.

Symptoms of a low inflammatory state going on in the lungs presented themselves a few days before death, constituting (as in the case of Wilson), the *pneumonia agonizantium* of Laennec; the expectoration became rusty and rather viscid, and some crepitation was heard posteriorly at the base of the lungs.

The existence of fluid in the cavity of the chest, discovered on the examination after death, had not been detected previously, and had most probably been effused but shortly before the close of the disease. When the chest was last examined, crepitation was heard down to the base of the lungs, which could not have been the case had a fluid effusion intervened at that time. Probably this had been found out during the long protracted dying state which frequently produces such a result, and which was the more likely in a case like this, where the blood is in a diseased and unusually fluid condition.

The kidneys presented a well-marked example of the granular degeneration; in

one of them, arrived at an advanced stage. Any further remarks on the *post-mortem* appearances will be reserved for a subsequent occasion.

REPLY FROM THE SURGEONS OF THE LIVERPOOL NORTHERN HOSPITAL,

TO THE PAPER PUBLISHED BY J. P. HALTON, IN OUR NUMBER FOR DEC. 29, 1843.*

To the Editor of the Medical Gazette.

SIR,

WE, the undersigned, shall feel obliged by your inserting, in the next number of your GAZETTE, the accompanying reply to a paper published in a recent number of the GAZETTE, by J. P. Halton, Esq., entitled "The Results of the Great Operations of Surgery."

Your obedient servants,

WM. GILL,
JOHN M. BANNER,
HENRY STUBBS,
WM. HENRY BAINBRIGGE,
Fellows of the Royal College of Surgeons of England, and Surgeons to the Liverpool Northern Hospital.

Feb. 1, 1844.

In a paper recently published by Mr. Halton in the LONDON MEDICAL GAZETTE, an attempt has been made to prove, that the capital operations in surgery, performed in the Liverpool Infirmary, have been followed by a rate of mortality very much below what has occurred in other similar institutions.

The objects of Mr. Halton in this publication appear to be—

Firstly, To laud the superior salubrity of the situation of the Liverpool Infirmary, and its more perfect management.

Secondly, To attach to the situation of the Liverpool Northern Hospital a source of evil to the public, calling for its suppression.

Thirdly, To show, by the results of the operations of a good surgeon, in a well ventilated and well managed institution, that the general results, derived by Mr. Phillips from the records of a number of hospitals in Europe and America, are either incorrectly stated, or are attributable to the bad surgery of their medical officers, or to an unhealthy site and bad general management.

To effect these objects, he compares the results of his own operations during a period of twenty-two years, with a table published in the MEDICAL GAZETTE by Mr. Parker, our house-surgeon, of the results of amputations during a period of seven years in the Liverpool Northern Hospital; and with the results of 640 amputations performed in hospitals in Europe and America, collected by Mr. Phillips, and published in the same journal. When Mr. Halton attacked the surgical practice of the Liverpool Northern Hospital, we think he ought to have consulted a pamphlet published by one of us, in the Edinburgh Medical and Surgical Journal, in which the results of our operations in the severest forms are tabulated, and sufficient details given of the cases, to explain what he calls our "high rate of mortality." It is at least a satisfaction to know, that our mortality after amputations is below the average result recorded by Mr. Phillips of his 640 cases, although we cannot boast of such apparent superiority as that claimed by Mr. Halton for his own practice.

Mr. Halton has been encouraged, by the advice of a medical friend, to sacrifice his unwillingness to appear in too prominent a position for the advantage of the profession, "as it would probably induce other hospital surgeons to follow the example; by which means we might ultimately obtain the important general record, the want of which is so much felt at this crisis, to correct the, what I believe to be, erroneous assertions put forth to the disparagement of operative surgery."

Had Mr. Halton been better acquainted with modern medical literature, he might have known that he is not the first who has applied the science of statistics to the correct appreciation of the risk of an operation in surgery; and he might have learned to have made use of numbers intelligently and fairly. When the science of statistics was first systematically recommended by Louis, as a proper means of settling many of the differences of opinion in medicine and surgery, as to the relative value of certain modes of treatment, objections were made to its adoption by several very eminent practitioners, as leading with an appearance of exactness into great error. It was urged, that if a calculation be made upon observations incomplete, inexact, or collected with a biassed spirit, into what errors will it not lead? This is, however, no objection to the method, but to the abuse which might accrue from ill intention or ignorance. Does not Mr. Halton lay himself open to one or both of these charges. His results are calculations from facts, the number and nature of which he has kept back from a feeling of modesty, which prevents him placing himself in too prominent a position, but at the same time permits him to claim for his own practice a superiority over that of other surgeons attached to the first hospitals in Europe and America. We can assure Mr. Halton that there are many of these hospi-

* The length of this paper has compelled us to omit several of the Tables by which it was accompanied. Two of the most important will be found in a subsequent page.—ED. GAZ.

tals in as salubrious situations, under as careful management, kept as scrupulously clean, and as well ventilated, as the Liverpool Infirmary. He cannot, therefore, under the flimsy veil of a complimentary reference to the pre-eminence of the Infirmary, its excellent site, and the careful management of its committee, conceal, that he would have it inferred that this extraordinary success is only referrible to his own extraordinary merit.

Mr. Halton gives us the proportion of deaths to recoveries, after capital operations, during a period of twenty-two years, and places the success shewn to the credit of the Infirmary. During four years of this period he had no connection with the Infirmary; and if we understand aright his rather obscure explanation, he introduces the results of his own private practice. These, and the operations performed in the Dispensary, have nothing to do with the site and management of the Infirmary. He in another part more distinctly attributes the success to his own merit. In page 9, he says, "the *risk* appears to me to lie in the manner in which it (the operation) is performed." In the following page, he suggests that the high rates of mortality in other hospitals arise from the registry of badly performed operations, of which he gives two specimens as occurring in his own knowledge. We question the propriety and use of such allusions, and we feel ourselves called upon to state, for the information of those who do not understand them, that these mistakes did not occur in the Liverpool Northern Hospital, nor in the practice of any of its surgeons.

We regret with Mr. Halton, that from the want of materials he has been unable to give a record of the results of all the amputations which have occurred in the Infirmary since he has been its surgeon. Such a table fairly drawn out would be to the point. Can it be true that the only record of the surgical practice of that institution is contained in a brief statement of operations during two years? and that there is no other record of the surgical practice of his colleagues? Where is the return made to a Committee of the House of Commons, of the operations and accidents during the four years immediately preceding the establishment of the Liverpool Northern Hospital, quoted by Mr. Halton in his pamphlet?

If this report exist, and there be attached to it the nature of the diseases and accidents for which the operations were performed, a comparison of the several classes in it with the similar classes in the full report published by one of us, in the Edinburgh Medical and Surgical Journal, might be fairly drawn, as the Infirmary at that time received all the accidents occurring in the town, the greater part of which were transferred to the Northern Hospital after its establishment. Mr. Halton's pamphlet, though first published in the MEDICAL GAZETTE, and consequently apparently addressed to the profession, is yet in its new form, with its luminous dedication to the committee, and its terminating appeal to the truly benevolent, evidently intended for non-professional readers; and upon these its conclusions, apparently fair, will produce the greatest impression. We have therefore great reason to complain of his omitting to mention, that there are some amputations attended with comparatively little risk, and others in which the chances of survival are small: the greater danger being, in general, in operations the results of accident, the least in those consequent upon chronic disease.

To place in a table of results such cases as of equal value is a deception. We should like to have Mr. Halton's views of the relative risks of amputations in different subjects, under the different circumstances of disease, age, sex, habits, and temperament; but we find he is prevented by the limits he has prescribed to himself, from entering into the question at all. Every where, as a comment upon the proportion of his deaths to recovery, he apologises for some of his deaths taking place where recovery, from the severity of the accident, could not be expected; but nowhere does he mention the number or relative proportion of deaths to recoveries after amputation for chronic diseases and for accident. The present limited accommodation of the Northern Hospital prevents chronic cases of surgical disease from being admitted in anything like the proportion to accidents that the chronic diseases in the Infirmary bear to the small number of accidents which are now admitted into that institution. May we not infer that Mr. Halton's report, as he calls it, is of operations in cases where accidents form the exception, and chronic diseases the rule? In the Northern Hospital, chronic surgical disease is rather the exception, and accident the rule. We conceive we are justified in this supposition by the following considerations. In all cases of amputation the risk from the operation is proportioned to its proximity to the body. In Mr. Halton's table the deaths from amputations of the thigh are one in eleven, whereas in the less dangerous operation of the leg they are as high as one in six. This apparent anomaly is easily explained. The most common amputation for chronic disease is that of the thigh, for white swelling of the knee-joint. This operation is most frequently performed in young subjects, and is, or ought not to be performed when there is a complication of visceral disease. A great number of these operations in an hospital would explain the success to which Mr. Halton lays claim. In our table of amputations performed in

the Northern Hospital in the course of nine years and two months, we have twenty amputations for disease of the thigh, and only one death. We have had, during the last two years, fifteen amputations from both accident and disease, and one death. In the practice of one of us, there have been no deaths consequent upon the amputations performed by him. It would be, however, very dishonest to point to this partial success as an indication of the superior surgery practised at our hospital. We refer to our table in the appendix for the severe nature of the injuries which have raised the mortality in amputations of the thigh to 1 in $7\frac{1}{2}$*.

		Cured	Died.
Of these, for Accidents..	10.	7	3
„ for Disease....	20.	19	1
	30.	26	4

Four deaths in 30; or 1 in $7\frac{1}{2}$.

In the very admirable paper published by Mr. Phillips, in the MEDICAL GAZETTE, he states, as the result of his researches, that he found "in certain hospitals the mortality after amputation has exceeded 53 per cent.; in several it has not exceeded 12 per cent., and in one of the number, out of twenty amputations there has been only one fatal result." Mr. Halton objects to Mr. Phillips not specifying the hospitals in which such extremes occurred, in order, we presume, that each should receive its appropriate censure or praise; but we conceive that in acting thus Mr. Phillips has exercised a wise discretion. He does not think that the great mortality in the one case, and the great success in the other, are necessarily indications of better or worse management; but points out in another passage how extreme differences in the results may depend upon differences in the nature of the accident or disease, and on differences in the general age, habits, &c. of the individuals operated upon in the several institutions. We will take the liberty of quoting a passage from Mr. Phillips's paper, to which, if Mr. Halton had paid attention, he might have found a solution of the extraordinary difference, if it exist, between the results of operations in the Liverpool Infirmary, and in the Liverpool Northern Hospital. "It may be thought that there are many sources of fallacy in investigations like the present—that certain hospitals are placed under peculiar circumstances, and that the results furnished by them would not be a fair representation of the whole. It is true that there are many hospitals so situated, either permanently, or in particular periods, as to render it probable that the results of amputations would be very unfavourable. In certain manufacturing towns a large number of accidents are produced by machinery. In such cases the injury may not be limited to the limb, which it may be thought prudent to amputate, and the death of the patient may be a consequence of the accident, and not of the amputation. Other hospitals may be peculiarly the receptacles of chronic disease. An improved system of treating such diseases may be employed there, and the number of amputations may be small; but from that very circumstance, from the operation being performed as a really last resource, the result of such amputations might be unfavourable." "I have therefore selected such hospitals as would produce something like an antagonism in this respect, and would render the results shewn a fair representation of what actually occurs." (*Vide* Phillips, MEDICAL GAZETTE, vol. xxii. p. 459.)

We hope to be able to shew, from a reference to the tables in the appendix, that the accidents for which, in general, amputations have been performed in the Liverpool Northern Hospital, place it in the first category; and without taking credit for any improved mode in the treatment of chronic disease, we may attribute our inferior success, if it exist, in the amputations of this nature, to circumstances in the cases which place them in the category of operations performed as a really last resource. We think we may fairly infer that the Infirmary is now one of those hospitals which Mr. Phillips would select as producing an antagonism to the Northern Hospital.

A difference of opinion as to the propriety of operating at once after an accident, or of waiting until the symptoms of collapse have subsided, may produce great difference in the proportions of deaths to recoveries after amputation, according as either one or other of these plans is adopted exclusively. This is a dispute in which many eminent surgeons have taken different sides, and "adhuc sub judice lis est." It is a question, whether it be wiser to run the risk of leaving the patient to die without operation from the irritation arising from the extreme severity of the accident, or to run the risk of adding to the depression of the nervous system by inflicting in the operation an additional injury. This dispute is well illustrated by the difference of opinion expressed with regard to the treatment of Mr. Huskisson's melancholy accident.

It is obvious that in an hospital where one system, that of waiting, is exclusivsly adopted, there would be fewer deaths after amputations in such cases, because there would be no amputations performed until after the collapse had gone off, but it is doubtful whether there would be less mortality. We insist upon this distinction being attended to, because we find in Mr. Halton's report, fifty instances of compound fracture in which amputation was not performed, but in which incisions were made and pieces of bone

* Amputations of the thigh in ten years, 30.

removed, of which eight died. Now without pretending to say that Mr. Halton did not exercise a proper discretion in not amputating in the cases where death took place, it will be seen from our *precis* of amputations, operation was performed in cases of equally severe complication, often with a fatal result, but at the same time sufficiently often with a favourable one to justify the propriety of the proceeding. In table III. (appendix), we refer to cases 2, 4, 5, 6, 7, 9, 22, 27, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, and 39, in which, from the severity of the complications, and the presence of severe collapse, no attempt was made to amputate, and the patients were left to the chance that collapse would subside, and the operation might be performed under more favourable circumstances. In one of these cases erysipelas supervened upon an individual in whom there were four compound fractures. In two others, extensive emphysema, complicated compound fracture of the leg, and fracture of the ribs. All medical men understand the extreme danger of this complication, which indicates more or less injury to the lungs. In table IV. cases 2 and 12, and in table V. cases 2, 7, 9, 11, 12, and 35, are instances in which amputations were performed in the case of severe complications, profound collapse, and hæmorrhage, and were followed by death. In table IV. case 1, and in table V. cases 10, 18, 19, and 36, are instances of amputations performed under similar circumstances of severe complication, with successful results. We refer to these tables in general, as confirmatory of our statement, that the accidents for which amputations have been performed are of extreme severity; and in those cases in which death has been the result, the amputation has been performed in the face of circumstances, in which, had we not been anxious to afford the patient the smallest possible chance, we might have been justified in not operating at all, and thus have saved our credit, by diminishing the proportion of deaths in our amputations, without, however, in the least diminishing the mortality in the hospital. In none of these fatal cases can death be imputed to the bad situation, or defective management of the hospital, as a large proportion of the patients sunk shortly after the operation.

Since the establishment of the hospital, there have been forty amputations for disease, of which five died; but of these five, two died some months after the stumps had healed, from causes having no connection with the operation, (vide table VI. cases 4 and 26,) one being pulmonary apoplexy, the other a sudden death, not explained, from inability to procure a post-mortem examination. The exception of these two cases reduces the proportion of deaths in amputations for disease, to 1 in 13⅓. Of these amputations, one successful case was at the shoulder-joint, and another was a case, in which, in an extremely debilitated subject, both legs were removed, one five days after the other. Two operations of excision of the elbow-joint were successfully performed. The operation is attended with more risk to the patient from the extent of the injury inflicted, than many amputations of limbs. Two cases of ununited fracture, one of femur, the other of tibia, were cut down upon, the ends of the bones sawed off, and union effected. One operation of extirpation of a great portion of the os calcis, for disease, was successfully performed.

Table I. contains an account of the results of the treatment of simple, simple comminuted, and compound fractures, from the opening of the hospital, to the 31st Dec. 1843. From this table it appears, that there have been 907 simple, simple comminuted, and compound fractures, of which 755 were simple and comminuted, 152 were compound.

Of the 755, three died, being cases of fracture of pelvis; of the 152, six died, being all compound fractures of the lower extremities. Tables II. and III. contain the results of compound complicated fractures of the upper and lower extremities, which were not operated upon; of these there are 59 cases, of which 25 died—17 in the upper extremity, of which 3 died; and 42 in the lower extremity, of which 22 died. In these tables are contained the worst of surgical accidents, which have entered the hospital, and we call attention to the severe nature of the complications in the fatal cases, as sufficiently explanatory of the results.

In Mr. Halton's attempt to account for the very questionable "*pre-eminence*" of the practice of the Liverpool Infirmary, over that of the Liverpool Northern Hospital, he thinks it probable that the healthy situation of the Infirmary, its cleanliness, and superior ventilation, may have contributed to that success. We find no fault with the glowing eulogium upon the situation, cleanliness, and ventilation of the Infirmary; but we maintain that Mr. Halton's description of the disadvantages of the present Northern Hospital, is exaggerated and unfair. Although situated in the least fashionable ward in the town, where disease and wretchedness prevail to the greatest extent, it is yet by its situation, internal management, and ventilation, however imperfect, freed from all the evil influences which make Vauxhall ward so very unhealthy, and which have been so well described by Dr. Duncan. There is no building within one hundred yards of two faces of the hospital, and the nearest warehouse is at least two hundred yards distant. Opposite to a greater part of the third side,

in Leeds-street, is a large flag-yard, from which no mephitic exhalation can arise; between the hospital and the canal, are coal-yards, and from the canal no danger need be apprehended, its waters being constantly renewed by fresh streams from the country. We claim for the Committee of the Northern Hospital as great attention to cleanliness, and to its general management, as Mr. Halton attributes to the Infirmary Committee: and although our ventilation be not so perfect as we could wish, from the circumstance that the building was not erected for its present purposes, but has been formed from two large and excellent dwelling-houses, yet very great improvements in the ventilation have been effected by the attention of its managers. Erysipelas, the scourge of many hospitals, is now comparatively rare, and there have been very few cases of idiopathic erysipelas for some years. The evil influences denounced by Mr. Halton ought to produce their effects upon all cases, medical and surgical indiscriminately, yet we are prepared to shew, from the comparative mortality of the two hospitals, that the results are, if anything, in our favour. From an average of four years, we find the mortality, in the general cases admitted into the Northern Hospital, to be as low as $6\frac{1}{2}$ per cent., whereas, in the Infirmary, it is 7 per cent. The average mortality of 63 European Hospitals (German, French, Swiss, Belgian, Dutch, Italian, and English,) is $8\frac{1}{2}$ per cent. The nature of the cases may be roughly estimated by the durarion of the treatment. The longer average duration will indicate the prevalence of cases of chronic disease. The average duration of the treatment during the last four years in the Northern Hospital, is 17 days. The average duration in the Infirmary during the last two years is 31 days. Supposing the daily cost of each patient, in each institution, to be the same, our patients cost the hospital a little more than one-half of the cost of the infirmary cases. The average duration of the treatment in three German, and ten Parisian hospitals, is $28\frac{1}{2}$ days. From these remarks we may infer that, in the Northern Hospital, the average of the cases is of acute diseases, as the duration of the treatment is short; and that its situation and management are not very bad, as the comparative mortality is small. Although we think ourselves justified in making these inferences from the facts stated in favour of the situation and management of the Northern Hospital, it is far removed from our belief that the same mode of reasoning applied to other hospitals ought, with justice, to condemn either their situation or management. There are circumstances in the history of these hospitals with which we are not acquainted, such as the number of beds, the nature of the diseases which are admitted or excluded, the average age and condition of the patients, &c. &c., which, if rightly appreciated, would probably place the hospital making the worst return upon the level of that making the most favcurable. We will illustrate this by two cases. In the Catherine Hospital, at Stuttgard, we have an average duration of $21\frac{4}{5}$ days, being indicative of the presence of acute disease, and not much greater than in the Northern Hospital, with an exceedingly low rate of mortality, being only $2\frac{3}{4}$ per cent. In the Hospital Neckar, in Paris, the average duration of treatment is from 33 to 34 days, and the mortality is as high as 13 per cent. The high character of the French hospital management prevents us fsom assuming the superiority in which the mere consideration of numbers, apart from other circumstances, would place us; and justifies us in supposing that our inferiority to the Stuttgard Hospital may be equally explicable by the consideration of all the circumstances. We believe that, in the Hospital Neckar, consumption forms a large proportion of the diseases treated; its duration is long, and its termination necessarily fatal. From the limited accommodation of our hospital, such cases are as much as possible excluded; and when admitted, the first favourable opportunity is taken advantage of for their removal.

The claim of advantage, in the nearer vicinity of the residences of the honorary surgeons to the hospital, is absurd. Mr. Halton should remember, that the hospital is for the benefit of the patients, and not for the convenience of the surgeon. How is it possible that a man can be the better for being carried at least a mile farther from the place of accident, with a fractured limb, complicated with hæmorrhage? At both hospitals he would receive immediate assistance from well educated resident medical assistants, members of the Royal College of Surgeons, quite competent to meet any emergency, and we are not aware of any case, in either medicine or surgery, under such circumstances, in which the delay of half or three-quarters of an hour in the arrival of the honorary officer is likely to produce any difference in the result.

We have a right to presume that the object of the subscribers to the public charities, in Liverpool, is to afford the greatest possible amount of relief to the sick poor. It is the duty, as it is the province of the medical men attached to these charities, to supply the information which their experience affords, of the best methods by which this object may be attained; and it is our opinion that they will more advance the cause of charity, by pointing out the defects in the management of their own institution, than by dwelling on their merits. A flaming self-

laudatory report satisfies the public with the good that is done, but is apt to turn away their attention from the greater good, which with the same means might be done. We are far from satisfied that the Northern Hospital is as efficient as it might be. We wish a better ventilation, and that the wards were less crowded; and we wish more especially, in the medical department, that we had fewer cases of chronic diseases, and more of the acute affections, for which such establishments are properly intended, and which we well know exist among the poor, and are treated at their dwellings, under the most unfavourable circumstances. It has long been the wish of the committee and medical board of our hospital, to remedy the two first defects, and we have now an early prospect of being able to do so, by the erection of a building adequate to the importance of the institution to the public. The medical men of the infirmary are equally well aware with ourselves that their wards are filled with cases of chronic disease to the exclusion of the more acute forms. The substitution of the latter for the former would swell the rate of mortality in both hospitals, but would nevertheless increase the utility of the hospitals to the public. It would be a means of offering, without disguise, to the contemplation of the more wealthy inhabitants, the full extent of the misery which prevails among their poorer fellow citizens, and which calls for relief,—a call which when heard has always been warmly responded to by the inhabitants of Liverpool. The machinery for effecting this purpose is at hand. The medical officers of the dispensaries, and the visitors of that most excellent charity the District Provident Society, come, in the performance of their duties, into immediate contact with the objects of disease; and, if the former were to cooperate with the latter, in selecting the most fit objects for the public hospitals, and would the managers of the hospitals place at the disposal of these visitors the power of filling up their vacant beds, the objects of charity would be more effectually served, and the necessity of even more extended hospital accommodation clearly demonstrated.

We have laid before the profession a statement of the surgical practice of the Liverpool Northern Hospital, and have compared the results with those of the Liverpool Infirmary, and other institutions, as far as we have access to them, with the object of defending ourselves and the hospital from a most unjustifiable attack. We have no wish, from anything we have brought forward in our own defence, that conclusions prejudicial to the Infirmary, or any other medical charity, should be drawn; and it must be clear, from the grounds of our defence, that we do not think any such conclusions would be warranted. We should be sorry to think there is no room for improvement in any of our public institutions; the best way to arrive at the cause of any defects requiring remedy, is, by comparing the results of different managements and modes of treatment; and we are very anxious to cooperate with Mr. Halton, his colleagues, and the other medical functionaries, in exposing the defects in the management of our own, and other institutions; and we believe our success will be the greater, the more we carry on our investigation in the spirit of that charity which it ought to be our common object to promote.

Simple and Compound Fractures which have been treated in the NORTHERN HOSPITAL, *from March 10th, 1834, to the 31st December, 1843, with the results.*

UPPER EXTREMITY.

Simple and Comminuted Fractures.				Compound Fractures.		
Bone.	No. of Cases.	Cured.	Died.	No. of Cases.	Cured.	Died.
Clavicle .	45	45	0	1	1	0
Scapula .	10	10	0	0	0	0
Humerus	64	64	0	14	14	0
Radius .	48	48	0	0	0	0
Ulna. . .	21	21	0	0	0	0
Ulna and Radius .	112	112	0	19	19	0
Total . .	300	300	0	34	34	0

LOWER EXTREMITY.

Simple and Comminuted Fractures.				Compound Fractures.		
	No. of Cases.	Cured.	Died.	No. of Cases.	Cured.	Died.
Femur . .	161	161	0	17	16	1
Tibia . .	29	29	0	0	0	0
Fibula . .	45	45	0	0	0	0
Tibia & Fibula .	188	188	0	100	96	4
Patella . .	13	13	0	0	0	0
Tarsus . .	9	9	0	1	0	1
Pelvis . .	10	7	3	0	0	0
Total . .	455	454	3	118	112	6

	9 YEARS 10 MONTHS, NORTHERN HOSPITAL.		2 YEARS, INFIRMARY.	
Simple comminuted fractures.	No. of Cases.	Deaths.	No. of Cases.	Deaths.
Upper Extremity . . .	245	0	34	2 or 1 in 17
Lower Extremity . . .	444	0	82	3 ,, 1 ,, 27⅓
Bones of Trunk	66	3 pelvis	32	1 ,, 1 ,, 32
	755	3, or 1 in 251 2-5ths	148	6, or 1 in 24⅓
Compound Fractures.				
Upper Extremity . . .	34	0	5	1 or 1 in 5
Lower ditto	118	6 or 1 in 13	13	4 ,, 1 ,, 3¼
	152	6 or 1 in 26⅓	18	5 ,, 1 in 3⅗

From this table, it appears, from a mere statement of numbers, without detail of circumstances, that the mortality in the Infirmary, in cases of simple Fracture, is between 10 and 11 to 1, as compared with that in the Northern Hospital. In compound fractures as 7 to 1.

TABLE OF DEATHS

Occurring in the Northern Hospital in the year 1843, *with the Duration of Treatment of each Case.*

Cases.	No. of days after admission.
2 Fever . . .	6, 11.
1 Phlebitis . . .	18.
2 Acute rheumatism (pericarditis),	28, 28.
1 Disease of brain (melanosis),	24.
2 Apoplexy . . .	5, 1.
0 Paralysis.	
1 Delirium tremens	2.
3 Aneurism .	1, 6, 1.
2 Pneumonia .	1, 1.
2 Acute bronchitis	9, 10.
5 Chronic bronchitis	5, 4, 1, 3, 8.
1 Hæmoptysis .	10.
3 Phthisis . .	15, 85, 6.
1 Cholera . .	1.
3 Dysentery .	14, 15, 12.
1 Acute peritonitis	8.
2 Ascites and anasarca,	21, 12.
1 Bright's disease of kidney,	86.
1 Diabetes mellitus	35.
1 Cancer uteri (peritonitis),	4.
2 Scorbutus .	4, 30.
1 Drowning .	0.
1 Hydrophobia .	1.
1 Caries of spine	36.
1 Concussion of brain(pleuro-pneumonia)	18.
1 Scalp wound, ruptured spleen,	4.
8 Fractured spine,	1, 41, 2, 1, 19, 32, 2, 1.
1 Peritonitis in a case of hernia,	26.
8 Burns and scalds,	1, 19, 7, 1, 2, 1, 10, 8.
2 Psoas abscess .	47, 6.
6 Fractured skull	1, 1, 1, 1, 1, 3.
6 Comp. complic. fract.	11, 17, 1, 23, 1, 60.
1 Ruptured liver	1.
1 Ruptured intestines,	1.
1 Cancer uteri (peritonitis),	4.
1 Strangulated femoral hernia,	2.
1 Intoxication .	1.
78 Total.	

Giving a total of 78 deaths in 1236 patients, admitted into the Northern Hospital, from January 1st, 1843, to January 1st, 1844, being one death in 15 6-7ths. Of these—

41 occurred in 507 medical cases, or 1 in 12⅓
37 ,, 731 surgical ,, 1 in 16⅔

The average mortality of 63 European hospitals is 1 in 11. The greatest mortality being in the Maria Hospital, at St. Petersburg, being nearly 1 in 4; the least in the Catherine Hospital, at Stuttgard, being 1 in 40. In the Liverpool Infirmary 1 in 13¼. If we add to the patients in the Northern Hospital 352 out-patients, the mortality is 1 in 22¼. The average duration of treatment for each patient in 3 Germaa and 10 Parisian hospitals, was 28 days. The maximum being 66 days in the Venereal Hospital at Paris, the minimum 20 days, in the Catherine Hospital at Stuttgard. The average duration of the treatment for each patient in the Northern Hospital is for 1843, 23½ days, that of the medical patients being 19 3-5th days, that of the surgical patients 24 4-7th. The average duration of the treatment of each patient in the Liverpool Infirmary was 35 days, in the year 1841.

It will be seen by the above table, that 27 patients, out of 78, died on the day of admission, being such cases of disease or accident as are beyond the reach of either medicine or surgery, and 15 died within six days, the average duration being 3½ days; consequently, 42 out of 78 of the deaths necessarily took place under circumstances of extreme gravity of disease.

99 medical patients were discharged from the hospital within six days after admission, being either slight cases, incurable, or irregular.

The out-patients being excluded from the general return in these calculations, they differ from some in the 18th page of the pamphlet.

CONTRIBUTIONS TO THE PHYSIOLOGY OF THE HUMAN OVARY.

By Charles Ritchie, M.D. Glasgow.

(*For the Medical Gazette.*)

[Continued from p. 365.]

Part I.

Section II.—*Cases in which menstruation had existed regularly, the parties never having been pregnant.*

1. Isabella K——, aged about 17, sober, industrious, and unmarried. Catamenia regularly present for eight periods before death, and the last time ten days before her decease. Cavity of uterus of a sooty colour. Ovaries very large and turgid, each measuring nearly two inches in length, and proportionably thick. No cicatrice was perceptible on their surface, but this was studded in both with small prominent vesicles, of a red colour, like those which we see before puberty, and there were, also, one or two capillary-sized points, in which the peritoneal coat was abraded, and slightly punctulated, as if from the rupture of similar vesicles. Internally both ovaries were filled with vesicles, one of which was very large, and its coats extremely vascular. There were two small and faint-coloured melanotic spots, corresponding to vesicles, the coats of which were, however, unaltered in their structure, and unconnected with any external lesion. No trace of a vesicle which had been affected by menstruation was perceptible.

2. Jean S——, aged 18. Menstruating thirteen days before death. Uterus small; the vessels of its entire inner surface greatly congested with black blood. Ovaries of normal length, but not plump, and very pale. No cicatrice on either, but peritoneal covering studded with numerous small bluish spots from adjacency of Graafian vesicles to its inner surface. In the right ovary were numerous vesicles, one as large as a dried garden-pea, and vascular, others of the size of mustard-seed, and some with their coats congested. In the left there were also many vesicles, although smaller and paler than those in the other, and on its superficies there was one minute red puncture, such as is sometimes seen in infancy, or before menstruation or puberty. No fatty tissue, yellow cysts, melanotic spots, or other indication of a Graafian vesicle having been acted upon by menstruation. Character of woman respectable, and os uteri that of virgin.

3. Catherine B——, aged 19. No children. Respectable character. Menses regular, and present nine days before death. Inner surface of uterus red, and fluid in tubes of a reddish colour. Both ovaries large, and mottled by livid maculæ from small vesicles approaching the inner surface of the peritoneal coat. One ovary also exhibited some reddish points, which were small Graafian vesicles already imbedded in its peritoneum and partly projecting from its external surface, and, also, three small cicatrices scarcely perceptible—one corresponding to a cavity of size of a garden-pea, lined with matter having a lively resemblance to convoluted brain garnished with its veins. This was of the thickness only of post-paper, and seemed to be made up of an inner membrane, and of another, more external, which was vascular, while external to this was a third, by which it was connected with the stroma of the ovary. The other ovary was marked by one or two irregularly-shaped cicatrices, and under the principal was a brainy cyst, of size of a large hemp-seed, and throughout the gland, an immense nnmber of small-sized Graafian vesicles in their natural state.

4, Agnes M——, aged 36 years. Unmarried. Had not had a child. General health good. Died of typhus. Catamenia regular, and present ten days before death.

One ovary. Its free edge drawn into a point by a mammillated tumor, almost as large as a small raisin, which gave the ovary a conical form, the tumor representing the apex. This tumor was covered by a thin transparent coating of the outer tunic of the ovary, through which ecchymosed spotsand vessels containing dark blood were seen to rest on a ground of a light red colour, and on the point of the tumor was an opening smaller than a pin-head, in which was a minute piece of coagulum. At some distance from this was another similar tumor, but flaccid and smaller, and on the other parts of the ovary were numerous

strongly-marked fissures. On dividing the gland, the first tumor was found to consist of an elliptical cyst of nearly half an inch in length, filled with a recent coagulum of blood, its inner surface, formed by the coats of a Graafian vesicle, thickly injected with turgid vessels, but still diaphanous, and not admitting of being separated into laminæ. The smaller tumor was constituted by what had been a large-sized Graafian vesicle, the coats of which remained turgid, but empty and without other changes. An elliptical yellow body, of small size, corresponding with the situation of one of the fissures, was also observed. Nothing remarkable in other ovary.

5. ——— ———, aged 22 years. Hymen perfect. Previous period of menstruation unknown, but the inner surface of the uterus had the dark, congested, and vascular look, which it has at, and for a short time after, the menstrual period —the minute vessels constituting this appearance being also covered with a white mucus, resembling that found uniformly in the fallopian tubes, and which is secreted also by the lining of the vagina. Ovaries large, and their surface indented and furrowed by numerous cicatrices. Internally were observed two sacs with yellow envelopes filled with blood of an extremely black colour, and in process of absorption; and also, in situation of what was, externally, a recent-looking tumor, of the size of a marrowfat-pea, having the peritoneal coat removed at its most projecting part for about the size of a barley-corn, but without any apparent opening, was a sac consisting of an inner delicate pellicle, and an outer, yellow-coloured, and thick coat, and containing a comparatively recent, but very solid coagulum, the periphery of which was indented with a number of fissures, corresponding to certain irregularities or duplicatures of the inner surface of the cyst, dependent on its begun corrugation.

6. Agnes N———, aged 19: unmarried. No children, and the appearance of the uterus precluded the possibility of a recent abortion. Menses present nineteen days before death. Both ovaries presented cicatrices and ecchymosed spots, the latter apparently more recent than the former, and having their centres perforated by foramina; and one of the cicatrices, around which the echymosis had disappeared, had also an opening leading into a cyst, of about the size of a small pea, lined with a very delicate transparent membrane, through which the yellow, or, in this instance, dirty cream-coloured matter on the external membrane was perceived. Adjoining to this was another body, corresponding with the most recent external ecchymosis, with which it was connected also by a foramen. It was of the size of a garden-pea, seemed covered internally by an extremely delicate diaphanous membrane, which was stained with red blood, and veiled a deposit of dirty cream-coloured matter, of the consistence of thin paste, which lay on the inner surface of the yellow opaque external covering of the cyst.

7. —— M'R——, æt, 45. Menses present. Various dark inky points in ovaries, which are of a fleshy consistence, and in the one ovary there is one, and in the other two vesicles, apparently Graafian vesicles, one of them as large as a nut, on which the peritoneum is absorbed to a few fibres, and the vesicles protrude from the ovary, covered only by their proper coats, and filled with an amber-coloured fluid, which coagulates with heat.

8. —— ——, æt. 40. Menstruated two months before death. Uterus large, but healthy. Both tubes shut, and adherent to ovaries. Ovaries large, and marked with indentations, and one of them with two minute vesicles slightly elevated above the surface. Substance of glands gave out fluid from innumerable points when cut, but few vesicles of any size were observable; and in situation of three of the cicatrices were corresponding yellow bodies without any blood in their centre, but having an accurate miniature resemblance, when cut vertically, to the hemispheres of the brain, both in the whitish, opaque, yellowness of their colouring, and the convolutent indented arrangement of their substance. In the centre of each was a line running in the direction of the length of the body, and filled with what might either be an extremely delicate inner membrane, or transparent lymph. Externally the yellow substance was covered by a delicate diaphanous membrane, through which it shone like a cartilage, and with which it could be dissected from the ovary.

9. ——— ———, æt. 25. Menstruated six days before death, which was from fever. Apex of one ovary occupied by a mammillated tumor, perforated near its point by a small circular hole, which, when cut vertically, was seen to consist of a cyst containing a solid coagulum nearly deficient of its red globules, and so consistent as to admit of being cut through its centre, one segment continuing to cover one hemisphere of the cyst, and the other the other. These latter consisted of a gamboge yellow matter arranged in slender convolutions, on the interior of a thin indivisible membrane, but no internal lining covering: this matter could not be detected either by the late Mr. Allan Burns, who gave me his valuable assistance in this dissection, or by my own efforts, after maceration in a solution of alum, and in warm water. No additional layer of membrane could be raised from the ovary in the bed of the cyst, and neither the sac nor the yellow deposit contained any visible vessels.

10. Marion B——, æt. 17. Menstruation of eighteen months standing, and regular, but last appearance not noted. No child. Habits good. Uterus and its orifice small; its inner surface pale. Ovaries of good size.

Right.—Free edge much denticulated at one point by an old cicatrix, the new matter forming the base of which is equal in size to that of a large split pea, and through this, a very vascular Graafian vesicle, of about the size of a hemp-seed, is seen rising: on opposite side of ovary from this is a second cicatrice, nearly as large as the first, and one or two of smaller size. Corresponding internally in the ovary to the last of the large cicatrices was a yellow, elliptical body, having something of a triangular form, from the conical elevation towards the surface of its upper or external edge, which was also serrated. The internal cicatrix, as it has been named, or line denoting the remains of the former cavity, was very well marked, and contained, at one part, a minute pale red coagulum. At one extremity of this body, owing to the absence at that point of an interposing internal cavity, the yellow walls of the cyst were about an eighth of an inch in thickness, and consisted of two parallel horizontal folds in close apposition, but quite distinct from each other; while in the other parts, which were traversed by the slender internal cavity, they were, of course, only half the thickness, but their substance in different places was observed to be beautifully injected with red vessels passing from the ovary. Corresponding with the first mentioned large cicatrix, but deeper in the ovary than the vascular unbroken Graafian vesicle which occupied its immediate surface, and also in the situation of two of the smaller cicatrices, were hollow, corrugated bodies of a white colour, and porous or granular-looking tissue small, and comparatively indistinct in the latter, but well defined in the former, and when cut into exhibiting a texture not unlike delicate cartilage.

Left.—Externally, four cicatrices of moderate size, and apparently old, corresponding to one of which, internally, were the remains of a well-marked white body, similar to those in opposite ovary, except that it had not a spherical form, but consisted of rather horizontal laminæ, its layers not gathered up into a little ball, but lying flat. Under another sac was a fawn or light stone-coloured cyst of the size of a split-pea, the walls of which were not thicker than writing-paper, and not at all corrugated; the central cavity remaining apparently of its original size, and occupied by a delicate fibrinous clot.

CASE OF EXTRA-UTERINE FŒTATION.

To the Editor of the Medical Gazette.

Sir,

We beg to transmit to you for publication in the Medical Gazette, the inclosed history of a case of extra-uterine fœtation, which was attended by us.

We have the honour to be, sir,
Very obediently yours,

G. W. Charleton, Gloucester.
J. W. Williams, Staunton.
} Surgeons.

Gloucester, Feb. 9, 1844.

Mrs. Lake, æt. 46, of Ashleworth, who had previously three times been delivered with difficulty, and the loss of the children, again became pregnant, and was the subject of the following case.

In the end of September 1843, being, as she believed, five months gone with

child, pain commenced in her left side, since which period she has never been quite well.

January 11th, 1844.—The waters broke, and her urine became bloody.

24th.—Pain in the abdomen commenced.

25th, two o'clock A.M.—The pain which began yesterday morning increased to the present time, and now is constant, and extends over the whole abdomen; it is accompanied by great tenderness when pressure is applied.

The patient is within ten days of the period when she expected to be confined.

Some fluid which escaped from her when being assisted to her bed was of a purple colour, and had a very disagreeable smell.

By examination per vaginam I could neither discover the os uteri or fœtus.

Capt. statim Tra. Opii. ʒss.

9 o'clock A.M.—The opium produced ease, and the discharge has gradually abated.

The pain within the last hour has returned, but not in a violent form. She has not made water for twelve hours. On the introduction of the catheter only about a tea-spoonful of urine flowed, and that was followed by a small quantity of pus.

Rept. Tinct. Opii.

My friend, Mr. Hooper, who for twenty-five years has most successfully practised midwifery, &c. at Staunton, favoured me with his counsel. He examined the patient, and also passed the catheter: the result was such as I had arrived at; he prognosticated a fatal issue, and observed, that "he had never met with such a case before," and recommended me to watch the patient.

12 o'clock P.M.—She is free from pain, and feels disposed to rest; the discharge continues in a slight degree.

26th.—She slept moderately well; her breathing is a little difficult; bowels have not acted since 24th.

Capt. Haust. Aperiens, 3tis horis.

7 o'clock P.M.—Bowels have not been evacuated. Pulse, which hitherto had been good, is 100; breathing is more difficult. She appears somewhat exhausted, and has great pain in her abdomen.

Capt. Statim. Vini. Ipecac. Tinct. Opii. aa. ℥xx.; Mist. Camph. ʒj.; and administer a little gravy soup at intervals.

12 o'clock P.M.—She has been relieved somewhat.

Rep. Haust.

27th, 3 o'clock A.M.—A sudden change has taken place for the worse: she has been sick; pain of abdomen returned with great violence. Pulse 120, and feeble; difficulty of breathing is more distressing; and she requires to be bolstered up in bed.

Capt. statim. Tinct. Opii. 3ss.; Aquæ ʒj.

She soon afterwards vomited, and appeared to be sinking. A little brandy and water revived her.

8½ o'clock A.M.—Mr. G. W. Charleton arrived from Gloucester, whose opinion and assistance I was most anxious to attain. He examined the patient, found the os uteri was dilated and soft; discovered the head to be the presenting part, recommended turning, and the administration of secale cornutum.

Capt. statim. et rept. post horæ quartam partem Secali Cornuti, ℈j.

9 o'clock.—I introduced my hand without finding any obstruction; the head presented, and felt as if surrounded by the amnion containing fluid. In bringing down a leg the cuticle peeled off it.

Pain in back, with periodical uterine pains, were experienced. Though slight extension of the leg was made, no descent was observable.

To take brandy and water every quarter of an hour, and gruel occasionally.

12 o'clock.—Her extremities became cold, and her pulse more frequent and weak. She vomited, and her speech altered.

Capt. Statim. Tinct. Opii. ℥x.

She rejected it.

Take ammoniæ and brandy and water, which was also vomited.

I again made extension of the leg, and found it perfectly unyielding.

7½ o'clock.—Pulse became imperceptible; eyes fixed; she vomited, was convulsed, and died.

Mr. Charleton begs to confirm the foregoing statement, and to append the following notes:—

When he visited Mrs. Lake, January 27th, 8½ o'clock A.M. (about five hours before she died), her features were contracted and anxious; pulse was 120, small and feeble; tongue

clean; breathing very hurried, and short; pain in left side was severe, particularly when she lay upon it or was moved. Chest when percussed was sonorous. A slightly reddened discharge existed; it had moistened a napkin which had been applied two or three hours.

The os uteri was dilated to more than the size of a crown-piece; its posterior half was defined, while its anterior was very obscure. Two bodies appeared to proceed from, and to be connected with, the interior of the os uteri: the one was about a third of an inch in thickness, and two inches in breadth, and felt somewhat like the edge of a placenta; and the other was thin, and resembled a part of a ruptured amnion.

By changing hands, and using my left fingers, I detected the fœtal head. It was situated anterior to the bodies just described, and was separated from my fingers by a thin texture. It very readily receded from the pressure I applied to it.

As the patient had endured more or less pain; had experienced some discharge, and had been losing strength for three days; as the os uteri did not by its size present obstruction, and as it was possible that the discharge might be owing to a partial detachment of the placenta from the os uteri (although the pulse was 120, and so feeble as hardly to leave a hope of success), I suggested that secale cornuti ℈j. be given immediately, and that a few minutes afterwards, when uterine action as its effect might be anticipated, that the operation of turning be performed.

As a quarter of an hour elapsed without pain, a second dose of ergot was administered.

Turning was accomplished with ease both to the patient and operator, and during its performance much flatus escaped from the anus, but not any hæmorrhage from the vagina.

When I subsequently applied extension to the child's leg I experienced a resistance as firm as if the fœtus had been adherent to the woman's pelvis.

The pain which followed the administration of the secale cornutum the patient described as affecting her back, being of a forcing down kind, and periodical, such as she had suffered in previous confinements.

Half-past 10.—As expulsive action had not assisted in the birth of the fœtus, and the patient was exhausted, it was agreed that brandy, arrow-root, and rest, should be trusted to for a while, and that manual assistance should be repeated if symptoms should render it eligible.

Post-mortem examination, Jan. 29th.

The abdomen is large, livid, and tympanitic.

Immediately on cutting through the lower part of the abdominal muscles and peritoneum, flatus escaped; and on elevating the parietes a full-sized fœtus presented itself to view. Its back was upon the os pubis, its head in the left iliac region, and one leg was in the vagina, while the other was near the left hypochondriac region.

The cuticle of its back and scalp was considerably detached, and the subcutaneous tissue of its back, head, and scrotum, was greatly distended with air.

The cavity in which the fœtus was placed was bound anteriorly, above, by the peritoneum which lined the abdominal muscles, and below, by the pubis and upper part of the bladder. Posteriorly, by the anterior surface of the uterus, and by the intestines, and inferiorly, by the upper portion of the vagina, with which it directly communicates by means of a large opening.

The above-named boundaries were lined and united by the membranes of the ovum, and by a little lymph, which, together, formed a layer hardly as thick as brown paper, which layer readily peeled off the parts it was united to.

The only recent lymph discoverable was attached to the anterior wall of the cavity in which the fœtus was found, viz. that formed by the abdominal muscles, &c. It somewhat assumed a purulent character.

The placenta was situated in the left side. It was united to the fore part (the outer surface) of the uterus, to the left side of the inner surface of the ovum, in the iliac fossæ, and, through the medium of the membranes, to a small intestine. To the latter it was most firmly, but least extensively, adherent. The portion of intestine to which it was fixed was connected with another fold of the same intestine by a small band of organised lymph.

The placenta was as large as usual, but rather thinner, of a lighter red colour, and was fibrous, as if composed

of smaller and less tortuous vessels than commonly is the case.

The uterus was entire. Its length was six and a half inches, its breadth five inches, and its thickness three inches. Each side of it was an inch thick. Where cut, it was white, and the largest vessels which were divided were the size of crow-quills.

Where the ovum was peeled from its surface it was smooth. Its cavity was rough, and reddened as if by the formation and attachment of imperfectly formed membranes.

The os uteri readily admitted fingers from the vagina. Its anterior lip was lost in the wall of the new cavity, and the soft bodies felt in the os uteri before turning was performed, could not again be recognised.

The right round and broad ligaments were distinct, but those of the left side were lost in the tissues of the abnormal cavity; hence the ovum was extra-uterine and tubular.

The bladder was contracted, and on being cut into it displayed at its back and lower part an ulcerated opening the size of a shilling. A finger from the vagina readily entered that opening.

The general cavity of the peritoneum was free from inflammation, and did not contain any effused fluid.

Queries.—May not the great decomposition of the fœtus be attributed to the admission of air into the ovum by an opening formed when the waters broke, a fortnight before the patient died?

May not the dead halt which was experienced when extension was applied to the fœtus, have been produced, 1st, by the weight of the child's body having been opposed to the force applied (as the patient lay rather on her belly); 2dly, by the pubis and uterus having presented mechanical obstructions to its direct progress; 3dly, by the leg of the child, which was above the uterus, having, when extension was made, pulled down the uterus, and so wedged the brim of the pelvis; and 4thly, chiefly and lastly, by the absence of that most powerful aid, uterine propulsion?

As the bladder was ulcerated (probably from the pressure of the head after the breaking of the waters), is it not likely that a similar absorbing process facilitated the communication between the ovum and the vagina, and that nature so promoted delivery?

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

Principles of Medicine; comprising General Pathology and Therapeutics, and a brief general View of Etiology, Nosology, Semeiology, Diagnosis, and Prognosis. By C. J. B. Williams, M.D. F.R.S. London, John Churchill. Pp. 400.

The great advancement made in those sciences which are justly considered as indispensable elements of a sound medical education, has not been attended by any thing like a proportionate improvement in our knowledge of the principles of diseased action. The necessity of being thoroughly conversant with those laws which regulate the animal machine, in order to attain to a right comprehension of the living human fabric in a state of health, is acknowledged on all sides: the same materials, of the self-same structure, are those which are implicated in disease; yet the body is then regarded as having assumed new relations—to have become amenable to new laws; and the treatment of disease, as a matter of course, is conducted on principles *sui generis* (whenever principles are consulted in the treatment), as if the phenomena of diseased function or structure could have no possible connection with those phenomena by which they are characterised when in a healthy state. In fact, there still exists, between practical medicine and its accessory sciences, a vast chasm, which the medical practitioner considers foreign to his vocation—nay even hostile to his interests to approach. It usually happens that, in first addressing himself to the great business of his profession, the care of the sick, the young practitioner altogether loses sight of, or lays aside as useless or inimical to his future success, all those principles which, in the early part of his medical career, he had been taught to contemplate as pertaining only to the body in its normal condition. Physiology is not the pro-

vince of the medical professor, who erroneously presupposing, on the part of his pupils, a capability of applying its laws (should he know them) to the elucidation of disease, rigorously restricts his lectures to special details. Nosological arrangements are notoriously worse than useless in practice, owing to the multitude of phases under which disease presents itself; and the practitioner is therefore left pretty much to his own ingenuity for whatever general principles his own personal experience may lead him to adopt. As these principles must correspond with the tone of mind and habits of reasoning of the individual, we need be at no loss to understand why there exists that conflict of opinion amongst medical men, at once the characteristic and opprobrium of the profession.

The work before us is well calculated to supply a most important link (above hinted at) in the chain of medical education. Disease is justly designated by the author *as merely a changed condition or proportion of function or structure.* "Disease can be known only by comparing the altered functions with a healthy standard, which it is the grand object of the accessory sciences, especially physiology, to define. Throughout our examination of diseases, the principles of pathology derived from a comparison with the principles of physiology are being continually exemplified; and those who commence the study of medicine by attempting to learn the details of diseases, are like those who would master all the facts of chemistry without the knowledge of chemical affinity and definite proportion."

The term "principles of medicine" is used by Dr. Williams as synonymous with the terms "elements or institutes of medicine," deduced "partly from anatomy and physiology," but "chiefly from a generalization of facts observed in an extensive study of disease itself, and its effects on the living and dead body." The large number of facts he has succeeded in bringing together in support of this position are arranged after the following method:—

1st, Etiology, or causes of disease, divided into predisposing, exciting, and non-cognizable, or such as are referred to epidemic, endemic, and infectious influences. Food and medicine are reckoned among the exciting causes; and certain doctrines on the animalcule and parasitic origin of certain epidemic and infectious diseases are considered under the third class. The author's views are better collected from the section "pathology proper," or "pathogeny," which comprises four-sixths of the bulk of the work. This section is divided into functional diseases, and diseases from perverted nutrition. Lastly, we have a concise disquisition on the classification of diseases, on prognosis and modes of death, and on prophylaxis and hygienics.

The terms, primary element and secondary element, heretofore restricted to the physical sciences, more especially to chemistry, are now, we believe, for the first time, rendered significant of corresponding simple and complete conditions of the body under disease. The primary elements of the functional or dynamic diseases are exemplified, 1st, in the excess, deficiency, or perversion, of certain well-known elementary properties of tissue, *e. g.* irritability, tonicity, sensibility, and the elementary function, nervous sympathy and reflexion; 2d, in certain changes of the elementary constituents of the blood. As examples of one or more of these three conditions of the elementary functions, we find (irritability) convulsions, spasm, cramp, and the susceptibilities of nervous persons, the effects of such poisons as tobacco, which produce death by destroying the irritability of the heart; (tonicity) the effect of cold and heat on contracted tissues, but "more distinctly characterised by increase of interval between the heart's beat and distant pulses; (sensibility) neuralgia, spinal tenderness, coma in certain apoplexies and narcotic poisoning, various nervous sensations occurring in hysterical females; (reflex function and sympathy) movements of the limbs, such as can frequently be produced in coma and paralysis by mechanical irritation applied externally, cardiac palpitation from intestinal irritation, spasm of the bronchi in asthma, traumatic tetanus; (constituents of the blood) discoloration of the red particles in malignant fevers. The black matter of melanosis seems to be the colouring matter of the blood in an altered state. The author asserts this to be true in spurious melanosis of the intestines

(fibrin and colourless globules). This paragraph contains a highly interesting exposition of the changes the blood undergoes during coagulation, the forces determining and modifying the separation of the fibrine from the red particles, the peculiarity in the aggregation of the latter, and the nature of the buffy coat, with their value as diagnostic signs.

The proximate elements of functional diseases is a legitimate distinction arising out of a combination of one or more of the foregoing primary elements: under this head we find anæmia and hyperæmia. We subjoin a tabular arrangement of hyperæmia; and, with an extract on the phenomena attending the process of inflammation, we must conclude our notice of the work.

				Results.
Hyperæmia, or excess of blood	General—Plethora	with motion increased—Sthenic		Hæmorrhage, Flux, Dropsy.
		——— diminished—Asthenic		
	Local	with motion diminished—Congestion		
		——— increased—Determination of blood		
		——— partly increased and partly diminished	—Inflammation	

Dr. Williams is of opinion that the known physical properties of the living body will account for the chief phenomena which mark the inflammatory process, and appears extremely unwilling to admit certain arguments in favour of the existence of vital attractions and repulsions, adopted by Haller and others, and recently advocated with much ability by Dr. Alison. We agree with him, that if the nature and effects of inflammation can be explained by reference to ascertained properties, it would be needless and unphilosophical to assume the existence of others which are mysterious and unknown. Without entering more at length on his line of reasoning, the following may be taken as a tolerably correct summary of the author's opinions on these points. 1st, obstruction to the passage of the blood in the vessels actually inflamed, an assertion which coincides with the microscopic observations of Thomson, Hastings, Kaltenbrunner, Marshall Hall, and of the author himself; 2d, increased flow through the vessels in the immediate vicinity of the inflamed vessels. These two conditions will account for the apparent inconsistency of the author's definition of inflammation, *e. g. local hyperæmia with motion partly increased and partly diminished.* The nature of this obstruction, the grand problem, to solve which so many theories have deen devised, is said to be the result of the following changes. 1st, the rapid production of numerous white (fibrinous) globules, which adhere to the sides of the inflamed vessels; and, owing to this circumstance, 2d, retardation, and ultimately obstruction, to the passage of the red globules. "The production of these globules, in local hyperæmia, must probably be considered as an ultimate fact in the history of inflammation and nutrition." Spasm of extreme vessels (Cullen), active dilatation, vital turgescence, turgor vitalis, inflammatory erection, can no longer have even a fancied existence. The degree of proclivity to inflammation is determined by the facility with which these *obstruction globules* are produced. The chief elementary components of inflammatory effusion are compiled by the author from the recent microscopic discoveries of many observers.

1. *Molecules*, immeasurable from minuteness, each appearing as merely a dark speck (*smaller primitive molecules*, Gruby).

2. *Granules* (Gerber, Addison), measuring from $\frac{1}{12000}$ to $\frac{1}{8000}$ of an inch, appearing as a light spot surrounded by a dark circle (*larger primitive molecules*, Gruby; *disks*, Barry).

3. *Fibrils*, extremely fine, forming the chief solid of fibrine and the buffy coat of the blood.

4. *Lymph or exudation corpuscles*, measuring from $\frac{1}{6000}$ to $\frac{1}{700}$ of an inch (Gulliver), composed of granules and molecules (nuclei and nucleoli), and sometimes enveloped in a cell.

Pus globules appear to be enlarged modifications of the last; and so are globules of mucus, and which, with nucleated epithelium particles, are commonly formed in the effusions from mucous membranes. *Yellow tuberculous* matter has been distinctly proved, by the researches of Gerber, Gulliver, and Addison, to consist of disintegrated or

degenerated exudation corpuscules or granules.

The mode in which the exudation corpuscules make their way through the coats of the vessels, so as to appear at their exterior, is not known. Pus globules, besides being larger than their progenitors, the exudation corpuscules, differ from them in being more distinctly vesicular, and containing a fluid as well as granules. But their great distinguishing characteristic is their want of cohesion; and in proportion as they predominate, they impair the consistence of fibrin or mucus with which they may combine. Pus effused into cellular and complex tissues also impairs their cohesion, and leads to the destruction of their substance; hence suppuration consists in not only a formation of pus, but also its substitution, more or less, of the inflamed texture. For this reason, suppuration, more than effusion, may be called a termination of inflammation; for the inflamed vessels are in a great part destroyed. It is assumed that absorption is still active in an inflamed part, and the assumption is warranted by the fact that the absorbent vessels, lacteals, and veins, remain perfectly free. The pus globules are now and then absorbed, and produce deadly effects upon the constitution; but their large size prevents this occurrence under ordinary circumstances.

The author's style of expression in general is argumentative and strictly to the purpose. His forte evidently lies in the didactic. His work, for the most part, is written in this style; but occasionally he wanders in the domain of trope and metaphor, and it is only then that we have felt uncertain as to his meaning. It is stated in the preface that "scientific men are not, and cannot be, practical," the simple converse of which proposition is, that practical men are not, and cannot be, scientific: if this be true, Dr. Williams might have saved himself the pains of his undertaking, which is avowedly for the purpose of bringing them nearer together. In S. 461 we read the distinguishing characteristics of pus globules "are their want of cohesion, and tendency to impair the consistency of fluids and textures with which they may come in contact." We were therefore not prepared to find it asserted in S. 470, "that obstruction in the circulation of the lungs and liver, in those cases where pus has forced its way into the general circulation, results from cohesion and consolidation of the globules of pus contained in the blood." Excepting these inadvertencies, the great object proposed to be obtained by the publication of the Principles of Medicine, viz. to bring about a better understanding between science and practical medicine, which, as twin sisters, should proceed by one path, rendering mutual good service to each, is never lost sight of. Important practical deductions meet the eye in every page. The work will prove very useful to the medical student; and to the practitioner who is desirous of keeping pace with the knowledge of the day, and of being informed of the many important discoveries recently made in the various branches of science connected with practical medicine.

MEDICAL GAZETTE.

Friday, February 16, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

METROPOLITAN MORTALITY IN 1843.

THE pen of the Registrar General has been unusually prolific during the last week. Besides the usual weekly table, now put forth in an improved form, we have been favoured with the quarterly table of provincial mortality, the annual chart of metropolitan mortality, and a fifth annual report, extending to 373 folio pages, with such a formidable display of tables, and such an array of algebraic formulæ, that mathematics must henceforth be classed among the indispensible preparatives for a medical education.

Out of this immense mass of material we have selected for present consideration the mortality of London in 1843, which will naturally lead to some reflections on the causes of the higher

rate of mortality in town than in country districts; a subject which is discussed at great length in the appendix to the Registrar General's report.

The mortality of London during the years '39-'40-'41 and '42, has been singularly steady. The numbers have been 45,441, 46,281, 45,284, 45,272, giving an annual average of 45,570. The mortality of 1843 has exceeded this average by no less than 3,004. It has advanced to 48,574, of whom 24,961 were males, and 23,613 were females. The first inquiry which naturally suggests itself out of this statement is, whether this increase is diffused equally over all the varied forms of disease by which the population of London is thinned, or whether it be confined to particular diseases, or particular classes of diseases. To determine this point, we may compare the deaths by epidemic and sporadic disorders, in the two years 1842 and 1843. In 1842, the deaths by epidemic maladies were 7696, by sporadic diseases 33,005, by old age 3346, and by violence 1225. In 1843, the deaths by epidemic maladies were 10,008, by sporadic diseases 33,907, by old age 3541, by violence 1118. It will be perceived that the difference is referrible almost entirely to the increased prevalence of the epidemic tribe of diseases, where, indeed, all great fluctuations of mortality might naturally be looked for. 2312 persons died of epidemic maladies in 1843, more than in 1842.

We have next to ascertain in which of the epidemic maladies has an increase of mortality been most conspicuous. The following table will put this matter in a very clear light.

Table of the deaths by epidemic and endemic diseases in London, in the years 1842 *and* 1843 *respectively.*

	1842.	1843.
Typhus . . .	1174	2083
Hooping-cough . .	1603	1908
Scarlet Fever . .	1224	1867
Measles . . .	1293	1442
Small-pox . . .	360	438
Diarrhœa, Dysentery and Cholera . . .	973	1160
Other zymotic disorders	1069	1110
Total . . .	7696	10,008

This table shows that all forms of epidemic malady have been more fatal (and we may fairly presume therefore more abundant) in the year 1843, than in the preceding year, but that the difference is greatest in typhus and scarlet fever. It is curious to witness the low point which small-pox has reached, the mortality by it in each of the two years scarcely exceeding one-fourth of that by measles. Some persons are sanguine enough to ascribe this to the operation of the Vaccination Extension Act. A few years, however, will shew the hollowness of this theory. All past experience tends to prove that the period of variolous epidemy will some day return, when in all probability either typhus fever, scarlet fever, or hooping-cough, will subside into the position which small-pox now occupies.

Season has, as usual, influenced to a certain degree the amount of metropolitan mortality. The order of the seasons in 1843, in respect of mortality, has been as follows:—

Quarter ending	Zymotic maladies.	Total mortality.
December 30 . .	2909	13,738
April 1 . . .	2071	12,312
July 1	2409	11,433
September 30 . .	2619	11,091
Total	10,008	48,574

The difference of result which the two columns of this table indicate, shews that the law which regulates zymotic mortality differs in some degree from that which influences the intensity of other forms of severe disease in man, especially of thoracic diseases, which, in respect of season, follow the order indicated by the total mortality.

We may now pursue our comparison

of the mortality in 1843, with that of former years, through the chief varieties of sporadic disease. Encephalic disorders caused in 1843 the deaths of 7729 persons. In 1842 the numbers registered under this head were 7595; in 1841, 7560. Consumption would appear to be rather on the decline. The respective numbers are, 1841, 7326; 1842, 7145; 1843, 7104. This, however, may be owing in some degree to altered nomenclature, for we find the total amount of pulmonic diseases to have augmented. The registered numbers are, 1841, 14,177; 1842, 13,990; 1843, 14,470; and a still more striking augmentation is perceptible in the deaths by cardiac disease. The numbers entered under this head are as follows: 1841, 993; 1842, 1046; 1843, 1234.

We can have little difficulty in ascribing this difference to improved modes of diagnosis. By the way, we are happy to find that the system of requiring a medical certificate prior to registering the cause of death is now very generally pursued in the metropolis. We hope it will be ultimately (and that at no distant date) rendered imperative by act of parliament. We do not anticipate any serious objection to such an enactment, originating either with the profession or with the public.

The mortality of abdominal diseases presents no feature of peculiar interest. The uniformity of the deaths registered under the head of "teething" is perhaps worthy of note. The numbers in the three past years have been 913, 914, 955. The total mortality by this section of maladies has been in each respective year 3390, 3396, 3708. Rheumatic affections, with other diseases of external parts, have been rather more fatal in 1843. The numbers registered under this head in 1843, are 326, while in the two preceding years they had been only 251 and 280. The heterogeneous complaints associated by Mr. Farr as the diseases of uncertain and variable seat (including dropsy, cancer, debility, and hæmorrhage), exhibit a slight diminution upon the returns of the two preceding years. The respective numbers are, 1841, 5456; 1842, 5715; 1843, 5205. We find in this division fifty deaths laid to the door of gout. Surely these would have found a more appropriate locality in class 9. The seat of gout can hardly be viewed as less fixed than that of rheumatism.

The following is a summary of the ages at which the mortality in 1843 has taken place. There died in London

Between birth and the age of 15	23,261
Between the ages of 15 and 60	15,397
Of the age of 60 and upwards	9750
Ages not ascertained	166
Total	48,574

This mortality upon a population of 1,876,000, gives one death to every 39 persons living, or very nearly 26 in 1000. This is far from being a high rate of mortality; nevertheless it exceeds considerably the average mortality of the country districts of England. Mr. Farr, in his explanatory letter to the Registrar General (page 200, Appendix to the Report), has entered at great length into the probable causes of this phenomenon. He first enunciates the fact by the following intelligible statement. The south-western division of England comprises, in Wiltshire, Dorsetshire, Devonshire, Cornwall, and Somersetshire, a population very nearly approaching to that of the metropolis. Making a due correction for the slight difference of population, it appears that there died, in four years, 176,210 in the metropolis, to 130,298 in the country district. The excess of metropolitan deaths was, in those four years, 45,912. In other words, a greater number died in *three* years in the metropolis, than died in *four* years in the south-western counties

of England: therefore the mortality in a dense population is, to that of a scattered population, as 140 to 108. Now what are the chief agents in the production of this result?

Mr. Farr acknowledges that we have not data sufficiently accurate to enable us to judge of the comparative incomes of the labouring population of towns and rural districts. Nevertheless, it is clear that the command over the necessaries of life is not in favour of the country population, which exports annually emigrants in the prime of life to the towns in search of better wages and more comfortable subsistence. The cause, therefore, of which we are in search, does not exist here. As little chance have we, according to Mr. Farr, of finding it in the ordinary atmospheric influences, heat, moisture, cold, and dryness, which must fall very equally upon town and country districts.

Mr. Farr considers, therefore, that we are thrown upon *atmospheric impurities* as the prime agent in bringing about the comparatively great mortality of towns. He shews how the atmosphere becomes vitiated by the respiration of the two millions of beings who jostle us in London, and by the innumerable fires and lamps which blaze around us. But he lays much more stress on the smoke and other matters *suspended* in the atmosphere of cities, as leading to the increased mortality there experienced. The following extract will convey to our readers the general result of Mr. Farr's reasonings on this important topic. We can only regret that our limited space prevents us from doing more justice to the author, by quoting his opinions at greater length.

"Every population," says Mr. Farr, "throws off insensibly an atmosphere of organic matter, which hangs over cities like a light cloud, slowly spreading, driven about, dispersed by winds, washed down by showers. It is matter which has lived, and is undergoing, by oxidation, decomposition into simpler organic elements. The exhalations from sewers, churchyards, vaults, slaughter-houses, and cesspools, commingle in this atmosphere, as polluted waters enter the Thames. In the transition to decay they become poisonous, and notwithstanding the wonderful provision of nature for the speedy oxidation of organic matter, the density of this floating poison is sufficient to impress its destructive action on the living;—to receive and impart the processes of zymotic principles, and to connect, by a subtle, sickly, deadly medium, the people agglomerated in narrow streets and courts, down which the wind does not blow, and upon which the sun seldom shines."

"To this cause," adds Mr. Farr, "the mortality of towns is, as it appears to me, to be ascribed. The people live in an atmosphere charged with decomposing matter, of vegetable and animal origin. In towns there are fewer facilities for the sunshine to decompose it, for currents of wind to sweep it away. It is most dense in the densest districts. Its effects, therefore, disease and death, must be most evident in towns, and in the most crowded districts of towns."

This latter proposition Mr. Farr proceeds to prove, by comparing the mortality of the Whitechapel with that of the Bethnal Green district, and shewing that the mortality is much higher in the former of these districts, where the density of the population is more than double that of Bethnal Green.

That there is much ingenuity and a great deal of truth in this exposition of the sources of urban mortality we do not for a moment question; but we think that the nature of the occupations of an urban population, and the attractions of the gin-shop, hardly meet with their due share of attention. Our space, however, does not allow a fuller investigation of the question, nor, indeed, is it needful. Our chief aim has been to lay before our readers, not our own speculations, but the deductions of Mr. Farr, whose thoughts

are constantly directed towards this subject, and whose herculean labours are incessantly devoted to the establishment of pathology upon principles as fixed as those which govern other branches of physical science.

WIDOWS AND ORPHANS OF MEDICAL MEN.

An advertisement on the wrapper of our present Number announces the Annual Dinner of the Society for the Relief of the Widows and Orphans of Medical Men; and we most earnestly request the attention of our readers to this most excellent institution. The following brief account is taken from the preface to the little pamphlet containing a list of its members.

This Society was formed in the year 1788, by Dr. Thomas Denman, Dr. Richard Dennison, Dr. Andrew Douglas, Dr. John Sims, Dr. John Squire, Mr. William Chamberlain, and Mr. Thomas Randall, with the object of establishing a fund for the relief of those widows and orphans of deceased members who might need, and be deserving of, assistance.

It unites the advantages of a provident, with those of a benevolent society. It is provident, as the members may, through it, protect their families from destitution; and it is benevolent, as its benefits are conferred on those who are left in indigent circumstances. All duly qualified members of the profession, residing within the limits of the Society, are eligible for proposal; and the mode of admission is by ballot.

The Society's affairs are managed by a president, twelve vice-presidents, three treasurers, and twenty-four directors, who are elected by the members annually, and whose services are gratuitous.

The Society has been greatly assisted by legacies and contributions from members and others, and has especially to acknowledge the gracious patronage of various members of the Royal Family.

The permanent efficiency of the Society depends on the maintenance of a due proportion between the available income, and the claims made on the funds. Computations have been made by experienced actuaries on points susceptible of calculation by way of average.

The proportion of members whose families may become claimants for relief scarcely admits of calculation; but the experience of more than fifty years has proved the wisdom and benevolence with which the Society was planned, and the prudence and efficiency with which its affairs have been conducted.

The Society is enrolled among friendly societies; the capital stock, converted into sterling money, is invested in the Bank of England at compound interest, and amounts to more than £41,000.

77 Widows, and 124 Children, have been relieved since 1793. 31 Widows, and 24 Children, are now receiving relief, which amounts to about £1,400 per annum.

LECTURE

ON

TUMORS OF THE FEMALE BREAST,

IN CONTINUATION OF THE LAST LECTURE; AND ON THE

ADMINISTRATION OF MERCURY IN CASES OF SYPHILIS.

Delivered in the Theatre of St. George's Hospital, Feb. 7, 1844,

By Sir Benjamin C. Brodie, Bart.

Tumors of the Female Breast.

Gentlemen,—The observations addressed to you in the last lecture were founded on the supposition that you would take care to distinguish scirrhous and other malignant tumors of the breast from those of a non-malignant character. I do not think it necessary to call your attention to the diagnosis of these different tumors, but I am desirous of impressing upon your minds that you must be careful to learn it for yourselves, from your own observation, and from other lectures. When a surgeon tells me that he has been particularly successful in the operation for scirrhous tumors of the breast, I always suspect that he has not been very accurate in his diagnosis. An acquaintance of mine once said that he had operated for scirrhus of the breast ten times, and that in no single instance had there been a return of the disease. An experienced surgeon would not have made such a statement;—and it so happened that he desired me to examine a tumor which he was going to remove, and I discovered that it was nothing more than a chronic abscess of the breast, which he denominated scirrhus.

On the Administration of Mercury in Cases of Syphilis.

I now call your attention to another subject—the administration of mercury in cases of syphilis. My object is not to enter into details, but to offer some general observations on the subject, which, at this time, when there is much difference of opinion respecting the use of mercury, and much random practice in its exhibition, may, I trust, be of some service to you when you first enter on the practice of your profession.

Mercury was employed for the cure of syphilis very soon after the disease was first recognised in Europe; I believe within three or four years after the siege of Naples, where it was formerly supposed that it first broke out. From that time to this, through good report and through evil report, in spite of the too strong prejudices of some in its favour, and of others against it, mercury has maintained its general reputation in the profession. However, at different periods, other remedies have been proposed as substitutes for it. Sir William Fordyce wrote a pamphlet to shew that syphilis might be cured by sarsaparilla; Mr. Grant, an army surgeon, alleged that it might be cured by opium; some one also asserted that ammonia would produce the same effect; and others have advocated the exhibition of nitric or nitro-muriatic acid. There have been many other such proposals, which it is not necessary to enumerate. In Spain, Portugal, the West Indies, the islands of the Pacific Ocean, and other hot climates, it is said, on what seems to be good authority, that persons recover from the venereal disease who never take a particle of mercury. Notwithstanding what I have just stated, in the beginning of this century there was a prevailing notion that mercury not only was a specific for syphilis, but that the disease could never be cured without it. Mr. Abernethy, in his work on what he calls pseudo-syphilis, lays it down as a rule that syphilis is uniformly progressive if this remedy be not administered. If a disease came before him in which the symptoms yielded without the use of mercury, he pronounced that the disease was not syphilis. It is true that he gave no reasons for this extraordinary assumption. It was a complete *petitio principii;* and this illogical conclusion has almost rendered valueless this part of his works. Not long after this opinion was published by him, and when I may indeed say that it was generally prevalent in the profession, a friend of mine, the late Mr. Rose, who was afterwards surgeon to this hospital, instituted a series of experiments on the subject of the treatment of syphilis. He had ample opportunities for conducting them, as he was surgeon to one of the regiments of Guards. Soldiers cohabiting with the lower order of prostitutes, are, as you may suppose, very liable to become affected with syphilis. For a year or two he treated every soldier labouring under the disease that came into the regimental hospital without mercury. I saw these cases, and from time to time watched their progress with him. Every sore upon the organs of generation got well under his management. Many of them, probably, were not venereal, but of course many of them were. The hardness of the cicatrix left after a venereal sore disappeared under this mode of treatment. Some of the secondary symptoms were slight, and others were severe; in fact, exhibiting nearly the usual character; but they went away without the use of mercury. Mercury was had recourse to in only two or three cases, and there it was rendered necessary, to save the eye, in consequence of inflammation of the iris supervening. Hence Mr. Rose came to a conclusion, which these cases certainly seemed to justify, namely, that syphilis was curable without the use of mercury. Other army surgeons repeated the experiments with the same results; and I believe that the disease is even now treated in the army to a great extent on the same system.

These observations led a certain part of our profession to a view of the subject entirely different from that which had been entertained previously. They not only alleged that mercury was unnecessary for the cure of syphilis, but that it did a great deal of harm, and that the introduction of it into the system was actually worse than the disease which it was intended to cure.

With respect to the recovery from syphilis without the aid of mercury, I may observe, that it appears to me that you cannot properly apply a rule drawn from the observation of what happens in soldiers, to society in general. In all cases the effects of disease depend very much on the kind of constitution that is attacked. Students coming from the country are often astonished by the difference in recovery from compound fractures in a London hospital, and where they have seen them occur in a purer air, and in another order of persons. In London the cholera destroyed 300 out of 15,000 inhabitants; in Sunderland it carried off a very large proportion (I forget exactly what) of the population; as it did in Paris also. In London its destructive influence was felt, not among the affluent classes, but among those who were ill fed, ill clothed, and breathing a poisonous atmosphere; and these last fell victims to it with great rapidity. So I apprehend it to be with syphilis. Soldiers are persons of strong constitution, and in good health, otherwise

they would not be received into the army. They are not much advanced in life; they are taken into a regimental hospital, are kept under the constant eye of the surgeon, and are dieted exactly as he pleases. The general health is attended to in every respect; they are not allowed to be exposed to the influence of atmospheric changes; and, in short, from their constitution, and from the situation in which they are placed, it may well be supposed that they have a power of throwing off morbid poisons not enjoyed by other persons. Experience fully confirms these observations. I know that in this hospital I have tried to treat syphilitic patients without mercury with very little success indeed; and I venture to say, that in private practice the attempt to adopt this plan, as a general rule, will always be a failure. Sir William Whymper, who was surgeon-major of the Coldstream Guards, but who has now retired from the army, and who saw a great deal of syphilitic practice, told me that he could manage the cases of private soldiers in this way, but not those of the officers. Mr. Rose at first thought that he might adopt the method of treatment which he had followed in the army in private practice also, but he soon found that here it was unsuccessful, and he was forced to give mercury just like other people. In cases where he did not administer it, he found that he was continually becoming involved in difficulties.

With regard to the other notion, that mercury often tends to aggravate the disease instead of curing it, I know that its injudicious use will often produce that effect; but I am satisfied, and experience fully proves it, that it is not so with its wise and judicious administration. It has been said that diseases of the bones do not occur where mercury is not employed; and, indeed, I believe that in patients in whom mercury has been injudiciously used, disease of the bones is more frequently met with than it was in Mr. Rose's patients, in whom mercury was not had recourse to at all. I know, also, that when mercury is given for other diseases—for example, for an hepatic affection, or for diseased testicle—it will sometimes be productive of nodes afterwards; but while I admit this, I still believe that syphilis will give rise to disease of the bones, even where mercury has not been given. I will mention a well-marked case in point. A gentleman had a chancre which no one doubted to be venereal; he took no mercury, and it healed up. I forget the exact symptoms which followed, but when I saw him in consultation with Mr. Rose, a couple of years afterwards, he had extensive disease of the bones of the nose, and the disease was still going on, in spite of various remedies which he had used, and yet he had taken no mercury. We agreed that the best thing to be done was to put him under the influence of mercury. He was to have taken lodgings in London, for the purpose of going through a course of mercurial inunction; but, in the meantime, he had a fit of epilepsy; this was succeeded by a second and a third fit. He became maniacal, and died. I do not know that his body was examined after death, but neither Mr. Rose nor myself doubted that the disease had crept up the ethmoid cells, affected the cribriform lamella of the ethmoid bone, and ultimately the brain and its membranes. I may mention another case, which also had been treated by Mr. Rose without mercury. A venereal sore healed with some simple treatment, but a few months afterwards the patient was seized with pain in the limbs, which were considered to be neuralgic. By and bye there were nodes on the shin and elbow. He had never had any disease before this chancre, and we could not but suppose that the poison had entered into the system, and that without giving rise to the first order of secondary symptoms, it had gone at once to the second order, and affected the bones. The conclusion of the case was remarkable; the patient got entirely well under the use of sarsaparilla.

Experience proves to me, and I am sure that it will prove to you also, that we have hitherto found no remedy having the same power of extinguishing the venereal poison as mercury. But then it must be judiciously administered at the time, and in such cases only as are proper for it; and without all this care it may do great harm. In this there is nothing at all remarkable, for (with the exception, perhaps, of sarsaparilla) I do not know any medicine calculated to do great good, that may not, under certain circumstances, operate as a poison. I saw a gentlemen very nearly killed by an over dose of quinine; others have died in consequence of the imprudent exhibition of the iodide of potassium, and others have been killed by arsenic. A remedy that is strong enough to do good is almost invariably strong enough to do harm, if it be not properly used.

You are not, then, to suppose that you are to administer mercury at random in all cases of syphilis: but the general rule is, that it should be given; and it being so, I shall endeavour to point out briefly, not the cases in which you may exhibit it, but the exceptions to the rule as to its exhibition.

There are persons of a certain delicate constitution, having what is called a scrofulous diathesis, disposed to phthisis, and other diseases of the same class, and here you should not administer mercury till you are quite sure that it is wanted. Nevertheless, I believe that scrofulous persons, who really have syphilis, are best treated by mercury.

If mercury be to them an evil, syphilis is a still greater evil. Scrofulous diseases are more especially developed after the system has been affected with a morbid poison. Scrofulous persons disposed to phthisis will have tubercles in the lungs after scarlatina, measles, and small-pox, and it is just the same after being affected with syphilis. Enlargement of the glands of the neck often takes place where the system is disturbed by the syphilitic poison; and this shows you what may be expected as to other organs. When in these cases it is absolutely essential to exhibit mercury, it must be done with great caution; the remedy must be given in moderate doses, and the patient must be carefully watched all the time that he is using it.

Persons that appear to be in strong vigorous health are not always good subjects for mercury. There are many persons of this description who, in consequence of drinking a large quantity of wine, and other irregular habits, are in a bad state of constitution, very unfavourable to the use of mercury. It is true that the poison of syphilis in such persons often produces frightful and intractable symptoms. But, nevertheless, it is best to defer the use of mercury until the constitution has been improved, for if you administer it sooner you have to contend both with the mercury and the syphilis. If you make the patient for some time lead a more regular life, and attend to his general health in all respects, you may then resort to mercury with advantage, and probably cure the disease.

There are some individuals in whom, for some reasons which we cannot assign, mercury always operates as a poison, and you cannot tell who these individuals are until you have made the trial. This is in itself a sufficient reason why you should watch every person very carefully to whom you administer mercury, especially if he has not taken it before.

In the case of primary sores, where there is a great deal of inflammation in the neighbourhood, it is scarcely ever right to employ mercury in the first instance, for the probability is that it will cause the inflammation to terminate in sloughing. The inflammation must be combated by bleeding, purging, and other means, and it is better to patch up the sore as well as you can, and let the disease go on until it has produced secondary symptoms, rather than to exhibit mercury under the circumstances just mentioned.

In cases of phagedenic and sloughing chancre, where its condition depends on a bad state of the patient's constitution, it is always wrong to give mercury at first, for it will aggravate the disease and make it spead more rapidly. But there are cases in which the phagedena depends on the intense action of the venereal poison; and here, as I shall explain presently, mercury may be given.

In cases of secondary symptoms, you will occasionally find that mercury, instead of acting upon and curing them, will disturb the general health, and at the same time aggravate the symptoms, and the more mercury you give the worse they will become. This arises from the patient being in a bad state of constitution, and which may depend on causes not under the control either of yourself or your patient; or it may be owing to his having taken mercury in an injudicious manner. Under these circumstances you must, for the present at least, suspend the use of mercury. The patient may appear to get well when first he leaves it off, yet he will probably subsequently require it again. To illustrate this last observation I will mention a case. A lad was brought into this hospital with a sore throat, and what appeared to be a syphilitic eruption in different parts of the body—in a state of painful ulceration. He was emaciated, and altogether looking exceedingly ill. I found that he had been taking mercury under a private practitioner, in large quantities, for not less than five months. His gums had been, and still were, exceedingly sore, and the more the mercury was pushed the worse he became. I directed him to leave off the mercury, and in its stead I gave him sarsaparilla. In a short time the eruption disappeared, and he was discharged as cured. After the lapse of a few months he came to the hospital again, with a sore throat and a return of the eruptions, having taken no mercury in the interval. I gave sarsaparilla a second time, and he got well, but the eruption did not disappear so rapidly as in the first instance. I still thought it imprudent to have recourse to mercury. After he had been away three or four months, he came to us a third time, with a recurrence of his old symptoms. I again resorted to sarsaparilla, and the eruptions yielded, but more slowly than on the previous occasions. Towards the conclusion of the time that he was in the hospital, iritis supervened, for which I gave him the oxymuriate of mercury for a short time, until the iritis had subsided. Some two or three months afterwards the disease again broke out, with nearly the same symptoms as before. Now he went into the Lock Hospital, under the care of Mr. Blair. This was fourteen months after he first came to St. George's, and he had taken no mercury, except for the iritis, during the whole of that time. Mr. Blair now, very properly, put him under a course of mercurial inunction, and I believe that he was permanently cured. If I had done this when he first came into St. George's, I should probably have killed him. I might mention a great

many cases illustrative of the same point, if it were worth while to do so.

I have said that, in the great majority of cases, mercury is the best remedy you can employ for the cure of syphilis; provided always that it be judiciously and properly administered. There are different ways of exhibiting mercury. It may be given by pills internally; it may be applied externally, in the form of ointment, or by the method of fumigation. The mercurial preparations that are given internally are various—blue pill, hydrar. c. creta, calomel and opium, Plummer's pill, iodide of mercury, bichloride of mercury, and some others.

You will find it very convenient to give it internally, in the shape of pills, when you want to affect the system rapidly, as, for example, in the case of iritis. A patient labouring under iritis is in danger of becoming blind, and you must put him under the influence of mercury as soon as possible; and this is better accomplished by giving calomel and opium than by using mercurial friction. In slighter cases of syphilis the disease may be cured very well by mercury exhibited internally. There are some patients so circumstanced that they cannot take it in any other manner; because they are living with their families, and for other reasons. Altogether, there are a great many instances in which it is either convenient or necessary to exhibit mercury internally. But if you ask me which is the best way of using mercury where the symptoms of syphilis are not of the very mildest character, I must say that that by inunction is infinitely to be preferred. Mercurial inunction is dirty, laborious, and troublesome, and it makes the matter public to the family in which the patient lives; hence it will generally be unpleasant to him; but it has these advantages:—it is much less liable to gripe or purge; it cures the disease a great deal better, and does not damage the constitution half so much as mercury taken by the mouth; nay, I will go so far as to say, that, except in the slighter forms of the disease, you really cannot depend upon any other kind of mercurial treatment for the production of a cure. You may patch up the disease by giving the remedy internally, but it will return over and over again, and then you may cure it at last by a good course of mercurial ointment properly rubbed in. The patient, if not well instructed, will perhaps continue the friction for a few minutes, but the friction should be continued before a fire at first for at least three quarters of an hour. After some time the ointment will enter the system more readily, and it may then be rubbed in for a shorter period. Where the symptoms are not of a mild character, the patient should, if possible, be confined to the house, except perhaps for an hour or two in a fine day. The going out into the fresh air (as Mr. Pearson observed long ago) will undo the effect of the mercury. You never can be responsible for thoroughly eradicating the disease where the patient is at all exposed to cold or wet, nor where he does not lead a most regular and careful life in all respects.

In all cases where you employ mercury, remember that you are to have two objects in view—first, to cure the present symptoms, and secondly, to prevent a return of the disease. It seems to me that a great number of practitioners at the present day keep in view only the first object, and lose sight of the second. I have frequently seen a person who has taken mercury for a chancre, which has, perhaps, healed in a fortnight, then leaving it off, although a very hard cicatrix has been left. Under such circumstances, in nine cases out of ten there will be secondary symptoms. If mercury be taken for the primary symptoms, the patient should never leave it off till the hard cicatrix has disappeared; nor, indeed, for some time afterwards. And so, with regard to secondary symptoms, it should be continued for a long time after they have disappeared. A man has an eruption of the body; it disappears, under the use of mercury, in the course of a month, but the remedy must be used as a prophylactic for another month. I should say, that if a patient be confined to his house, or only allowed to go out a little in a fine day, and if he be made properly to rub in the ointment, and the course be carefully watched and continued for some time after the symptoms have subsided, you will, in the great majority of cases, make a real and permanent cure of the disease. This is not, I fear, the way in which it is administered by the majority of practitioners now, but it was so administered formerly. You must not suppose that we have advanced alike in all departments of surgery; indeed I am sure that in some things we have gone back, and I believe this to be one of them. I am much mistaken if the mercurial treatment of syphilis, as employed by the late Mr. Pearson during the greater part of his life, was not as nearly perfect as possible. At any rate, it was much more successful than the less careful treatment of modern practitioners. That gentleman was surgeon to the Lock Hospital, and having no general hospital to attend to, the powers of his mind were more especially devoted to the study of syphilis and its treatment; and the practice which I have now recommended was that which he usually adopted. I had an opportunity of meeting him a great deal in private practice, when I was young in my profession, and I am satisfied that his practice was eminently successful. In a work of his, on the articles of the materia medica recommended for the cure

of syphilis, in which there are many excellent observations on the use of mercury, he enters into details in a way in which it is not my intention to do at present. I refer you to his work.

I will take this opportunity of stating a class of cases in which you may employ mercurial inunction with the greatest advantage. Children are sometimes born with syphilis—the father or mother having been affected with it. The child looks thin, and is of small size, and instead of thriving becomes thinner and thinner. At the end of three weeks it is covered by a red scaly eruption; there are aphthæ in the mouth, chaps about the lips and the anus. Where this combination of symptoms exists, you may conclude that the child is affected with syphilis. I have tried various ways of treating such cases. I have given the grey powder internally to the child, or some kind of mercury to the wet nurse. But the mercury given to the infant by the mouth gripes and purges severely; that given to the wet nurse cannot be depended on; and at all events the latter is a very cruel and scarcely justifiable practice. The mode in which I have treated such cases for some years past is this: I have had a flannel roller, on one end of which I have spread some mercurial ointment—say a drachm or more: I have applied the roller thus prepared round the knee, and repeated the application daily. The child kicks about, and the cuticle being thin the mercury easily enters the system. This causes neither griping nor purging; in a child it does not even in general cause soreness of the gums, but it cures the disease. I have adopted this practice in a great many cases with the most signal success. Very few of those children recover in whom the mercury has been given internally, but I have not seen a single case in which this method of treatment has failed.

Mercurial inunction may be employed in certain cases in which mercury taken internally would absolutely do the greatest harm. For example, a gentleman had a phagedenic sore upon the penis. It could not be said that he was in ill health before, and therefore there was reason to believe that the disease was spreading, from the intense influence of the venereal poison. He took calomel and opium; the gums became tender; but the sore became worse than before, spreading more rapidly: the greater part of the glans was destroyed. The disease shewed no disposition to stop, and resisted all modes of treatment, until at last he was put on a course of mercurial inunction, when the progress of the ulceration was at once arrested, and the sore healed as fast as possible. I have seen several cases of the same kind.

Another mode of employing mercury is by fumigation. It may be applied locally—to a part; or generally—to the whole person. In the latter case the patient is placed in an apparatus like that used for sulphur fumigation, but instead of sulphur the black oxide of mercury is thrown upon the hot iron. If you wish the system to be affected as speedily as possible, this may be accomplished by his holding his head in the inside of the bath for two or three minutes, and inspiring the mercurial vapour. I have used this with success in several cases where it was my object at once to affect the system, but I have found that Mr. Peason's objection to it is very well founded—namely, that it is difficult in this way to regulate the action of the mercury. You may affect the system too much, or too little; and you may be taken unawares by the patient's gums becoming all at once excessively sore. With respect to the effect of mercury on the system generally, I may observe, that you cannot thoroughly depend upon it as an antisyphilitic remedy, unless the gums be made rather sore, and there be some degree of salivation.

But, as I have already stated, there are cases in which mercury is not proper at all, and in which there are reasons for doing without it, either altogether, or for a time. In some individuals, in private practice, as well as among solders, by mere attention to the general health, the disease will be thrown off. A gentleman had a well-marked venereal eruption. He was in London, and was going to take mercury, but was called into the country, and I therefore advised him to defer it for the present. Shortly after being in the country, and under the influence of a purer air, all the symptoms vanished. Similar cases are recorded in Mr. Abernethy's book, and he, as I have already mentioned, concludes (somewhat hastily) that the disease was not syphilitic. After a mercurial course it is not sufficient to let your patient go, and say your disease is at an end. It is very important that he should be kept in good health. There are many persons in whom the disease is never so thoroughly eradicated but that, if the health be broken down, it may shew itself again a considerable time afterwards. It is always well, after a long mercurial course, to put the patient through a course of sarsaparilla, with a view to remove the debilitating effects which the mercury itself produces on the constitution. I will mention a case, to shew how much depends on the state of the general health. A gentleman had secondary symptoms: I put him through a course of mercurial inunction, and for ten weeks he was altogether confined to his house and most carefully attended to. He took mercury for some weeks after the eruption had disappeared. Appearing to be quite well, he went to Lisbon, and continued well. But at the end of a year he took cold, which was followed by a severe

attack of erysipelas. A practitioner whom he consulted very indiscreetly bled him to a large extent. An enormous abscess formed, and between the erysipelas, the abscess, and the loss of blood, his health became completely broken down. While in this state he had a return of the venereal disease, the symptoms being of a more severe character than formerly. An English surgeon, resident at Lisbon, put him under a course of mercury, and cured him. In cases where symptoms are aggravated by the use of mercury, they may often be removed by sarsaparilla; and in other cases they will subside under the use of the iodide of potassium. It is very much the custom now to administer the latter remedy in cases of syphilis; and no doubt, in some instances, it is productive of very good effects. It comes in very well where you have reasons for not giving mercury; but if you ask me whether you can rely upon it as you can upon mercury, I say, "Certainly not." You may remove slight symptoms by giving it in small doses for a long time; and more severe symptoms, by exhibiting it in larger doses; but in the latter cases, so far as I have seen, it does not make a permanent cure, and the symptoms return even under the use of the remedy. As a prophylactic, iodine is not to be compared with mercury, although it may be taken under certain circumstances with the greatest advantage.

I have spoken of the necessity of administering mercury, not only till the symptoms are relieved, but for a considerable time afterwards. But you may ask, whether a long course of mercury is not more likely to injure the constitution than a short one? Undoubtedly it is; and that is the very reason why you should prefer a long course. I will explain what I mean. If the course be a short one, the disease is sure to return; you have then to repeat it, and again the disease reappears. Thus you have repeated courses; and not only is the system weakened by the mercury itself, but the venereal disease, whenever it does return, assumes a more formidable character than before. But if, on the other hand, you put the patient through a long course in the first instance, such a frequent recurrence to the use of mercury will be unnecessary. A patient who takes mercury for a chancre, for a month or five weeks, may probably never want it again; but if it be taken only for a fortnight, he has secondary symptoms, and then it will be required for at least six weeks, perhaps for ten; so that that which is a short course at first becomes a long one in the end.

With these observations I conclude the course of lectures which I undertook to give during the winter. But before we part, allow me to make a few observations with respect to the lectures themselves.

When I resigned my office of surgeon to this hospital, some three or four years ago, I could not but recollect that it was here that I had been able to lay the foundation of what little knowledge I possess of my profession. I also remembered that some of the happiest hours of my life had been passed within the walls of this institution, in friendly intercourse with my pupils; and that among the latter I had found some of my sincerest and kindest friends. Altogether I felt that I owed a debt of gratitude to St. George's Hospital and the school attached to it; and it was my wish, as far as I could, to do something towards discharging this debt. Under this impression, I offered to the Weekly Board, and to the medical officers, to give this annual course of lectures.

I have endeavoured to give you some information which, however little its value may be to those experienced in surgery, will, I hope, be of use to you, who are younger men. But I had another object in view. The lectures, as you may have perceived, have been entirely practical, and have been drawn from scarcely any other source than my own observation and experience. I wished to give you an example of what your own mode of study ought to be. In these times there is a great quantity of medical literature, such as it is. There are books on specific diseases, dictionaries, cyclopædias, compendiums, pocket-books of all kinds, and nothing is more easy than for a person who has a tolerable memory to look into books and learn by rote the prevalent doctrines and opinions of the day, and then to be able to discourse on these subjects as if he really understood something of them, and pass what is called a good examination—that is, answering the questions put to him to the satisfaction of his examiners. But depend upon it, this will be of no use to you hereafter. A man who is contented with getting up this sort of knowledge is, in practice, absolutely good for nothing. He goes to a patient's bed-side, but not knowing anything of disease practically, he is in doubt respecting the treatment which he should have recourse to, and he has not that confidence in himself which will enable him to take the heavy responsibility, which, as a medical practitioner, he ought to take, in difficult cases. You must, in order to be qualified for the situations you are to fill in life hereafter, gain your knowledge, not from books, but from your own observations and investigations. I do not say that you are not to look at books, and to read them, but you should do so only in conjunction with practice. If you have a particular case before you, refer to a good book, and that will enable you to examine the case far better than you would otherwise do; but the principal thing is to observe symptoms

and the operation of remedies for yourselves. The same rule applies to anatomy, to surgery, and to physic. You may get up anatomy by being examined by your teachers, and by conning over compendiums, and you may appear a very good anatomist when you go up for examination; but anatomical knowledge is of no avail in practice unless you have acquired it by studying the parts in the lecture-room, and examining them for yourselves, and with your own hands, in the dissecting-room. A person who has acquired anatomy in any other way will find that he has no chance whatever when he comes in competition with one who has made himself an anatomist by dissection. And I repeat that it is the same with respect to hospital practice: you must study the cases, and observe them for yourselves. Examine them in the morning, refer to your books, or notes, in the evening, and reflect on the observations which have dropped from the medical officers. Take notes with your own hands; no person can learn medicine or surgery who does not do so. It is the only way to obtain the real practical information.

I take the liberty of making these observations, not that you particularly need them, but believing that they may be useful to all younger persons in our profession. Be assured that the mode which I have pointed out is the only one by which you will be enabled to succeed in the exercise of your profession with comfort to yourselves, or advantage to the public. In fact, I think that very few will get any practice at all who pursue their studies in a less legitimate manner. I say all this with the most entire feelings of friendship, and influenced by an earnest desire that you may be successful in your undertakings, and do honour to the school in which you have received your education.

NOTE FROM DR. LYNCH.

To the Editor of the Medical Gazette.

SIR,

As the letter of Sir Benjamin Brodie, which you inserted last week, implies a charge against me of misrepresentation, I beg to give the following reasons for making the public statement, that he had described the great body of general practitioners as a subordinate class:—

1. That he is reported in the Lancet, at that period the only record of medical affairs, to have used it at a meeting of hospital surgeons.

2. The charge is repeated at page 215 of the first volume of that work for the year 1829, in a letter from a correspondent.

3. That the assertion was repeated on several occasions in the editorial comments of the Lancet and other journals, without any attempt to deny or to refute it.

4. That he frequently used the terms higher and lower grade in his evidence before the select committee of the House of Commons.

5. The charter itself which he then propounded, and since succeeded in effectuating, contains all the invidious distinctions that degrade the members who were before *equal*, and create a body of Fellows without any fixed standard of qualification, or without reference to age, station, attainment, or utility; and thus, as a necessary consequence, all the members not belonging to the Fellows are placed in the category involved in the answer to the question 5723 of the same inquiry, beginning thus—"Would the members of your proposed lower grade," &c. &c.

6. Because all those who practise midwifery—the most useful, the most indispensable, and frequently the most difficult branch of medicine, requiring knowledge, skill, and great manual dexterity — are deemed unworthy of a seat in the Council of the College of Surgeons! On this silly pretext nine-tenths of the members, to whom the maintenance and restoration of the health of the great majority of the people of these realms are intrusted, are made a subordinate or lower class.

I leave to the philology of the learned and ingenious baronet the choice between the two terms. For my part, I consider "lower grade" to be the more offensive.

I am, sir,
Your obedient servant,
JORDAN ROCHE LYNCH,
M.D. M.R.C.S.L.

Feb. 6, 1844.

[We have given insertion to the above from a desire to be impartial; but we trust the matter may now be considered as at an end.—ED. GAZ.]

ACNE INDURATA.

To the Editor of the Medical Gazette.

SIR,

I SHALL feel obliged if you, or any of your numerous readers, will, through the medium of your valuable journal, inform me the best and most successful treatment of acne indurata. In the obstinate case that urges this request, the digestive organs are healthy. Lotions of hydrocyanic acid, bichloride of mercury, and borax, have failed.

I remain, sir,
Your obedient servant,
A CONSTANT READER.

Feb. 6, 1844.

JUDICIAL ADVICE TO MEDICAL PRACTITIONERS.

"In the course of a case which was tried at the Old Bailey yesterday, a medical witness in giving his evidence used the word 'tumefaction,' upon which Mr. Justice Coleridge said, 'I suppose by tumefaction you mean swelling.' Witness—'Yes, my lord.' Mr. Justice Coleridge—'Then it would be much better to use plain English, than to speak that sort of mongrel Latin.'" Such is the purport of a paragraph in the *Times* of Wednesday, or rather such is the paragraph itself. Now we must say, that, if correctly reported, Mr. Justice Coleridge was most absurdly hypercritical; we deny that "tumefaction" is mongrel Latin, or even a pedantic expression, and we think it rather too good that the lawyer should think of correcting the doctor for a fault which the world at large regard as *par excellence* the foible of the gentlemen of the long robe.

EMPLOYMENT OF CHLORIDE OF ZINC IN TOOTHACHE.

By Dr. Stanelli.

According to Dr. Stanelli, the chloride of zinc, liquified by exposure to the air, possesses the property of calming dental pains.

His mode of application is most simple. By means of a small hair pencil, a small quantity of it is applied to the cavity of the painful tooth, and in the space of a few minutes it appeases the most acute sufferings, without causing any irritation.

Before proceeding to the application, it is indispensable carefully to surround with cotton wadding, and, when the chloride has been applied, to well fill the cavity with this same cotton. The mouth is finally washed with a little warm water.

The author affirms that he has obtained uniform success from this means in more than fifty cases, and that he has never observed the progress of the caries rendered more active by it.—*Annali Universali de Medicina;* and *Chemist.*

RHEUMATISM IN THE HORSE.

M. Tessin remarks that M. Bouley, one of the most experienced veterinary surgeons in Paris, assures him that the ordinary course of rheumatic inflammation in the horse is the reverse of what is usually the case in the human subject. In the latter, as all know, the affection of the joints is primary, and that of the pleura, pericardium, or other internal part, is consecutive, or secondary; whereas, in the former, pleuritis is generally the primary, and the arthritis the secondary affection.—*Veterinarian.*

THE HUNTERIAN ORATION

Was delivered before the members of the Hunterian Society, on Tuesday last, by Mr. John Hilton, being the twenty-fifth anniversary. It was our intention to have given it in the present number, but its length obliges us to postpone it until our next.

BOOKS RECEIVED FOR REVIEW.

Two Essays on the Diseases of the Spine: 1. On Angular Curvature of the Spine and its Treatment. 2. On the Treatment of Lateral Curvature by Gravitation, Lateral Exercise, &c. By R. A. Stafford, Fellow of the Royal College of Surgeons of England, &c. &c.

Elements of Physiology, for the Use of Students, and with especial reference to the wants of Practitioners. By Rudolph Wagner, M.D. Translated from the German, with Additions, by Robert Willis, M.D. Part III. On Sensation and Motion.

A Manual of Pharmacy for the Student of Veterinary Medicine; containing the Substances employed at the Royal Veterinary College, with an attempt at their Classification, and the Pharmacopœia of that institution. By W. I. T. Morton, Lecturer on Veterinary Materia Medica, &c.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, February 8, 1844.

T. G. Tebay.—B. Viret, Swindon, Wilts.—C. Sutcliffe, Todmorden, Yorkshire.—W. M'Cheane, Liverpool.—J. Chambers, Hackney Road, London.—R. H. Powell, Tunbridge Wells.

METEOROLOGICAL JOURNAL.

February.	Thermometer.		Barometer.	
Wednesday 7	from 27	to 41	29·04	to 28·99
Thursday . 8	31	41	29·10	29·12
Friday . . . 9	29	40	29·02	28·99
Saturday . 10	32	36	29·16	29·41
Sunday . . 11	30	35	29·45	29·60
Monday . . 12	36	28	29·65	29·69
Tuesday . 13	21	34	29·74	29·76

Wind, on the 7th, S. by E. and S.W.; 8th, S.W.; 9th, S.W.; 10th, N.W.; 11th, N.; 12th, N. N. by W. and N.; 13th, N.

The 7th, morning, light rain; afternoon generally overcast; evening raining. 8th, generally clear, rain from 4 till half-past 4. 9th, morning clear, afternoon and evening cloudy, with rain. 10th, morning cloudy, afternoon clear, evening generally overcast. 11th, morning clear, afternoon snowing; evening generally cloudy. 12th, morning cloudy, afternoon clear, evening cloudy. 13th, morning hazy, clear till the evening, when it became foggy.

Rain fallen, ·3 of an inch.

NOTICE.

The length of Mr. Walne's paper precludes its insertion in the present number, but it will appear in our next.

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, FEBRUARY 23, 1844.

ORATION

DELIVERED BEFORE THE

MEMBERS OF THE HUNTERIAN SOCIETY,

At the 25th Anniversary,

By John Hilton, Esq. F.R.S.

Lecturer on Descriptive and Pathological Anatomy, Guy's Hospital.

Mr. President and Gentlemen,

It has often been remarked, that when a stranger enters St. Peter's, at Rome, for the first time, the immediate impression is one of disappointment; the building looks smaller than he expected to find it. So it may be said of the first sight of mountains; their summits never seem so near the clouds as we expected to find them.

But a closer acquaintance with these, and with other grand and beautiful objects, convinces us that our first impression arose, not from a want of greatness in what we saw, but from a want of comprehensiveness in ourselves to grasp it.

What we saw was not all that existed, but all our untaught glance could master; as we know it better it remains the same, but we rise more nearly to its level; our greater admiration is, indeed, but the proof that we are become able to appreciate it more truly.

Something of this kind, modified into adaptation, will exemplify what have been my feelings regarding myself and the Hunterian Oration; such was my early misconception of what I had promised, that whilst I was a looker-on through the vista of a twelvemonth, it seemed, at that distance, simple, easy, unimposing, and almost unassuming, to engage to prepare a short discourse.

As I had been journeying on the circle of the last year, and so brought nearer to the object, divested of the long shadow of a coming event, I obtained a more exact view of what I had voluntarily undertaken.

I confess myself chilled and embarrassed by its nearer approximation, and by its importance; and although attracted by the aspect it wore, I was indisposed, until compelled by stern necessity, to enter upon its details. Thus far, the analogy was faithful to the oration, and impressively true to myself.

As I became better acquainted with its intended comprehensiveness, and the necessity for its completion, through the rigid and unvarying admonition of time, I am compelled to admit, that whilst I found myself quite equal to a proper appreciation of my difficulties, I felt equally certain that I was not rising more to their level. I could not, by any diversion, or temporary interpretation, induce myself to praise an undertaking the fulfilling of which I had so much and so justly admired from the lips of my predecessors.

With such harbinger of my result, I would most willingly have turned away from its contemplation, had I not been restrained by a sense of what was due to the Hunterian Society and my own consistency.

The public records of this Society do not furnish or provide any direction for the character or subject of the annual Hunterian Oration; this probably intentional omission of its earliest proposers and advisers left me no alternative but to select some considerations, not aspiring to novelties, but to which I thought I could draw attention, with a slight hope of their being not altogether unprofitable to some members, by bringing before them facts in advance of days gone by, or by reminding them of what may have been displaced from their stock of memory by fading time, or added occupation; and in the further hope that those others, whose high attainments and extended experience have rendered them distinguished and lustrous ornaments of our profession, and this Society, might be induced to receive

them with solicited indulgence, without feeling that they have sanctioned any thing unworthy their presence, or that they have done more than sacrifice their time in aid of the Society's established custom, and added a required encouragement to a good intention on the part of one of their associates.

The name of this, the Hunterian Society, gives the first claim to the memory of a man now more than half a century the child of history, but who may, nevertheless, be deemed, by reflection, the parent of this Society. For although its archives do not hold his autograph, it adopted his name as its leading feature; it received from him, through those taught by his former pupils, its earliest members, the impulse of existence, the fruitful seed of that character for sound practical observation, for proper appreciation of facts, and love of truth, which continue to uphold it conspicuously in a community redolent with talent and accumulating intelligence.

To the Hunterian Professor at the Royal College of Surgeons belongs, essentially and specifically, the completion of another portrait of John Hunter: upon him will devolve, to-morrow, the reanimation of his mundane existence, the tracing from his birth the gradual development of his character and acquirements.

It will be for him to shew the influences of education, and natural predilection, on his career; to examine the means and appliances which he made serviceable; to raise up, in high and bold relief, the superstructure of his active mind; to place before his audience the immediate consequences, the progress, and the results of his doings; to lay open, expose, and place in their proper light for transmission or reflection, the features and expression of a life whose extent of benefit to his profession, and real good to mankind, is yet, notwithstanding the many good and safe deliveries, within the womb of time.

But, Sir, looking upon John Hunter as our peculiar guiding-star, and admitting the influence of his ascendancy over our proceedings, I cannot avoid taking a transitory telescopic view of him, and the light he shed over the sphere of his occupation.

To John Hunter belonged an untiring energy, which thwarts procrastination or forgetfulness; he had inherent in his nature an enduring perseverance worthy the object, and equal to the destination he had planned for it.

If we refer to his course of varied pursuits, we are compelled to admire the zeal and indomitable industry which he employed to lay the foundation for that splendid and unique museum which now shines forth bright with science, and radiant from its Hunterian nucleus.

Hunter dwelt and communed with nature all the days of his professional life; he watched her proceedings with an earnest anxiety to explore her deep recesses, and to understand her emanations. He became the companion, but the humble servant, of nature, following her, with gentleness and respect, through many of her infinite windings and mazes, noting with admiration the succession of her proceedings, and thence denoting honestly his own opinion of her laws, or what seemed to him to be the impelling, the guiding force: thus he became the translator of the book of nature, and his eye could detect design and beauty where the atrabilious sceptic beheld nothing but confusion and deformity. His mind contained the most estimable and enviable power of ascending, by self-acquirement, from particular facts to that broad generalization which has given him a just claim to human originality, by the establishment of fundamental principles.

By his elaboration and legitimate influence, a large number of facts, in which, before, order and connexion did not appear at all, or appeared by partial and contradictory glimpses, were brought into a point of view in which these properties of order and connexion became their essential character. By him it was shown, that a contributing fact, although dislocated, was but the manifestation of the same principle, and that each particular was what it was by virtue of the same original impression: thus by him the inscription was decyphered, the truth enunciated.

His was not the refinement of a premeditated or specially adapted education. We may discover in his writings that he did not possess that exactness in the use of words which leads to the most precise expression; his was not that instinctive, harmonious, glowing language, which would express less if uttered more. Indeed, we cannot deny that some of his ideas are invested with much obscurity.

With his facts perhaps recently acquired we may see the rapid flow of reasoning flooding over, or breaking down, its natural bounds; his super-imposed inferences, full of expanding truth, seem to oscillate and tremble when tried against the weight of true induction.

His literary compositions may be indistinct by their fulness, and dark with abundant meaning: they have been accused of incomprehensiveness, yet, as a whole, they have withstood the swelling conflux of time and opposing circumstances.

Some of his opinions and conclusions freely promulgated, perhaps too freely, deduced as from nature, rude in form—hence not her transcript—these, nurtured by nature's self, and to us immature, have remained nearly inviolate, and will doubtless

continue for the mental plenitude of successive generations, to ponder and dwell upon as sacred veiled truths—

"Like words
That leave upon the still susceptive sense
A message undelivered—till the mind
Awakes to apprehensiveness, and takes it."

Hunter's reputation was not of that parasitical character so often witnessed, and of which he himself became subsequently the support; he was the sturdy oak, he was not the ivy: he laid the basis of his own elevation; he saw himself raised up into acknowledged superiority by the development and growth of those germs he himself had planted and cultivated. When he discovered himself placed in that proud and isolated position, which proclaimed him, by almost general consent, the regenerator of his art, we see no poisoned weapons cast down upon his jealous or aspiring cotemporaries, no unmeasured vanity for himself, no contempt for others. How striking and pleasing in this respect does the contrast appear in the expressions of Hunter and Paracelsus, each in his zenith, each addressing introductory remarks to a course of lectures to his own pupils.

Hunter says, "I do not mean that all I say in this course will be new, that none of the opinions and observations which I shall deliver are to be found in any publications; but many of my ideas, and the arrangement of my subject, are new; and consequently my terms become in part new."

Paracelsus lived when a bald head and a long beard were considered as wisdom and intellectual: I think he must have taken as his prototype, Zoilus of old, the pretending critic of Homer and Plato, who always kept his head close shaved, believing that the hairs of his head would have acted as so many suckers, drawing away the nourishment from his chin, and by that means have starved his underhanging, and, in his opinion, his understanding, beard.

But to Paracelsus:—He exclaims, "I would have you to understand, that the meanest hair on my head knows more than all your writers put together; the very buckles on my shoes are more learned than your Galen and Avicenna, and my beard has more experience than all your academies; nor is the hour far distant when I shall see the swine pulling my opponents through the mud." No wonder he was proud of his beard, that he could sing his own praises so well, and was disgusted with swine; for at three years old he is said to have been made an eunuch by a sow.

Hunter was not successful as a public teacher: why was this? May we not apply for Hunter the reasoning employed by Socrates under similar circumstances? Socrates, who was the son of a midwife, used to say, "that as my mother, although she is very skilful in her profession, cannot deliver a woman unless she be first with child; so neither can I raise knowledge out of a mind where nature has not planted it. It is true Hunter did not attract a *large number* of congenial minds; but he taught and directed Home, Baillie, Wilson, Chevalier, Abernethy, Carlisle, Coleman, Macartney, Astley Cooper. *Each* of these was *himself* a host.

Hunter aimed at final truths, which only meditation can discover, and only experience recognize. His was an ascendancy, the fruits of a life of accumulation. His opinions may fall; but his facts are immutable, imperishable; they belong, not to years nor to ages, but to all time, and stand secure,

"Like some tall rock, whose bare broad bosom high
Towers from the earth, and braves the inclement sky,
In conscious pride, its hugh gigantic form
Surveys imperious, and defies the storm."

He has left a name which must be held in praiseworthy remembrance by the whole world, but especially by his countrymen, so long as honourable industry and integrity shall be considered virtues—so long as contributions to science, and the benefit of mankind, continue passports to distinction and fame—so long as a proper sense of humanity has a place in the human heart.

Leaving the further consideration of Hunter to the appointed authority at the College of Surgeons, I wish to remind you of one of the several means which appears to me to have been made largely available in raising our profession so near to the character of a science.

We have in our times, hydropathy, homœopathy, neuro-pneumatism, neuro-magnetism, mesmerism, and other doubtful, if not *untrue-isms*, lashing propriety and common sense with loud and precocious display: we may hear—

"These partial spirits now aloud complain,
Think themselves injured that they cannot reign;
And own no liberty but where they may,
Without control, upon their patients prey."

To the biography of science, these hypotheses will appear only as so many names gilded by fashion (that unwholesome arbiter of right) with gaudy and meretricious colours; they add nothing to the science of our profession, nor will they append any thing permanent to the basis of our principles of practice; they are the dissolving views of the day.

Sixty years ago, Dr. William Hunter, a man of deep thought, and great foresight, in one of his lectures says, "Were I to guess at the most probable future improvements in physic, I should say, that they would arise from a more general and more accurate examination of diseases after death. And

were I to place a man of proper talents in the direct road for becoming truly great in his profession, I would choose a good practical anatomist, and put him into a large hospital to attend the sick, and dissect the dead."

Such was the opinion of one of the most distinguished men of his day; and we cannot but remark, how curiously true and prophetic it has been, as regards the source and means of elevation adopted by all the truly great in our profession since that time, and I should say also, of the steady and certain improvements in our knowledge of disease.

But, gentlemen, let me divest your patience of any thing like alarm. It is far from my intention to attempt the placing before you the accumulation of opinions and facts convergent to the present period of professional acquirement.

Our profession may now be considered a compound of science and art; yet we must acknowledge, as a science, it is very imperfect; and daily experience compels us to admit, that, as an art, it is most difficult and perplexing.

In all ages we may discover many authors, who publish their opinions, if, for no less worthy object, certainly for the purpose of obtaining experience and practice.

Others, the true benefactors to the profession and to the commmunity, write their experience for its own sake; from an honest belief and conviction of its intrinsic merit, as a worthy contribution to the existing stock of knowledge.

If you would desire to see, and to appreciate, the value of facts in pathological anatomy, look to the mass of books of our profession, brought to light during the early part of the last century, and compare them with those which bring us to our present period.

With few (but most honourable) exceptions, you will find the former occupied with dogmatical language, replete with conflicting uncertainties, the leaves covered with presumptive and grandiloquently expressed opinions; whilst those of the later date (but also with some very striking and much to be regretted exceptions), will be found teeming with pathological facts, well observed, and properly associated with symptoms during life, based therefore on physiology, with opinions promulgated as fair deductions from them.

If you admit this simple and plain proposition, that diseases are to be understood and treated according to their nature, and not in reference to their names alone, you at the same time, and by the same expression, acknowledge the value and importance of morbid anatomy.

The full admission and completion of this proposition has led to the very just opinion, that a great part of the successful treatment of disease depends upon the clear discrimination of disease.

In the practice, at least in the honest practice, of our profession, the first thing to be done is, to ascertain if possible the *actual nature*, not merely the symptoms of the disease presented for our opinion.

A professional man ought to endeavour to answer severely and satisfactorily, this self interrogation—Am I certain of the nature of this disease, the cause of the symptoms?

If the reply be satisfactory, I need only appeal to your recollections, to remind you of the agreeable confidence you obtain in your subsequent plans of treatment.

I have no hesitation in stating my conviction, that too many of the profession treat the symptoms, and omit the other considerations as to cause.

There are others, who, from want of time or habit, or from other unintelligible influences, do not even take the trouble to analyse the symptoms, so as to elucidate their origination; or, to separate those which belong to the predominant disease from those which may be accidental, without any necessary association with the disease to be treated.

Symptoms of disease are only the expression of suffering, or uneasiness on the part of the organ or organs diseased.

Symptoms are, *if properly appreciated*, the external demonstration of internal derangement; and we know by experience, that they may exhibit themselves at the seat of the disease, or somewhat removed from it.

Patients judge of their disease by the symptoms; we ought to judge of the symptoms, by the disease, by the cause, by the pathological anatomy of the symptoms.

I suppose we must on reflection arrive at this conclusion—that the laws of animal organization, of health, and normal function, have been the same from their first existence. Nor can I suppose it will be doubted, that the symptoms of the *same disease* have been always *the same*. The same symptoms have constantly presented themselves for observation, soliciting prehension from successive generations: why were they not understood? why never properly appreciated, nor attached to structure?

I think it will be admitted, that one of the great, if not the greatest of the contributing causes, towards elucidating diseases, and dragging them, by the weight of facts and by the force of reason, from the contracted thraldom of nosology or nomenclature, and towards fixing the principles of the practice of medicine and surgery on a sound broad basis, may be found essentially in the more exact observations on the results of disease—their pathological anatomy.

In the practice of medicine, the greatest assistance has been derived from the study

of morbid anatomy, associated with symptoms.

What has led to the extraordinary and astounding precision, now so frequently presented to us by some of the profession, in distinguishing, locating, and treating diseases of the chest. It may be replied, auscultation; but a moment's reflection will convince us, that, without the confirmation, the crowning mark of pathological anatomy, it could not have proved any thing. Auscultation has only given you additional means of exploring, it gives you the symptoms; morbid anatomy explains to you the cause of the symptoms.

The pathological anatomy of the lungs encourages the hope in all of us, and to many gives the proof, of the curability of many cases, formerly grouped under the unstructural and indiscriminating denomination of phthisis.

Post-mortem evidence has separated the heat of pneumonia from idiopathic fever; and although it has done little towards stating what fever is, it has done much towards proving what it is not; namely, that it is not, as we were desired by the would-be authorities to believe, an uniform, recognizable, structural lesion.

Post-mortem examinations have demonstrated that many diseases of the chest depend upon the want of due relation between the capacity of the lungs for ærating the blood, and the size of the organ for circulation; that these organs become cause and effect to each other's diseases: to be in perfect health, they ought to be in perfect equilibrium.

The more frequent causes of very sudden death are now proved to be at the heart, and not in the brain, as formerly supposed; the symptom is the same, it is apoplexy still. It was always cerebral, it is now generally cardiac.

The secretion of air by serous membranes will be proved to be a mere supposition, growing out of imperfect examinations after death.—How many causes has morbid anatomy enabled us to discover for dropsy, formerly classed as a disease, now admitted to be only a symptom?—By what means have we arrived at our present knowledge of the immediate and the remote effects of renal disease, with its modifying influence upon other local or general affections, if not by morbid anatomy?—Whence will be derived the truth, which is now gradually evolving itself, whether coagulable urine may depend upon other lesions, with or without disease of the kidney? I say, morbid anatomy, in a great measure. I believe more careful observation after death will shew us that internal hæmorrhage, by exudation or transudation, is at most a very rare occurrence, and that hæmorrhage from the nose, hæmoptysis, hæmatemesis, hæmorrhage from the bowels, and hæmaturia, are local defined lesions, ruptures or ulcerations, very small, but discoverable by care and perseverance.

It appears to me very difficult to imagine or to understand that local condition of blood-vessels which will allow general exudation or transudation of blood through their parietes at thousands of points at the same time. If it were from congestion, the very circumstance of the blood escaping at one point would prevent a further escape, by taking off distension.

On the other hand, several cases of internal hæmorrhage, which would, with the ordinary routine at post-mortem examinations, have been put down as from exudations, I have myself proved to have been caused by very small ulcerations, not larger than the head of a pin, or by the rupture of a very small blood-vessel.

From examination after death, of cases observed during life, I am confident that some of the cases of chronic rheumatism, and those cases which are known by the obscuring titles of chronic rheumatic affections, are, much more frequently than is supposed, diseases of the nerves; and, I may add, that the cause of such symptoms is very often discoverable, by tracing the anatomical associations of the nerves of the part.

When we inquire into our actual and positive knowledge concerning the diseases of the nervous system, the different opinions and prevailing uncertainties, which are daily witnessed concerning the same case, offer any thing but a very favourable indication; yet, upon a retrospective view, we are very far in advance of our predecessors; an improvement depending very much upon an improved pathological anatomy—the more accurate association of disease to symptoms.

We are yet deficient in that precision, as to cause of symptoms, which I have mentioned as now so ostensible in diseases of the heart and lungs. Many causes contribute to this: an incapability of positive discrimination as to the cause of nervous function, or of making any just comparison between it and physical agents with the properties of which we may be familiar; a want of *very* accurate observation and notation of symptoms during life; defect on the part of the necroscopist in detecting disease with accuracy, when indicated only by slight changes in colour and in consistency, or in properly attaching either or both of these evidences to their true causes, whether *ante* or *post mortem*, &c. &c.; these, and many other real and important considerations, in reference to the ages of the patients examined, might be mentioned. What geography is to the truth of history.

anatomy is to practical medicine and surgery. Our first and great imperfection in the nervous system is due to our deficiency in the anatomy of the brain and spinal marrow. It is at present unsatisfactory to the best anatomists.

I think I need only remind many whom I have the honour to address, of those halcyon days of study at *alma mater*, dura mater, and pia mater; of the lobes, of the different corporate bodies, thalami, hippocampi, tænia, fornix, eminences and depressions, septa and surfaces, columns and commissures, glands, and admitted dark places, &c. &c. which were then found in the brain, to obtain their acknowledgment that the anatomy of the brain required improvement and more certainty.

If I advert to the large and more recent foreign importation of unmeaning anatomical nomenclature, I apprehend it will be confessed there is yet much to be done towards exposing and elucidating the real structure. Look, for example, at that colony of new names now located on about an inch of the cerebellum, including, literally, a valley, its flocks, its fissures, its specific and little hills, three commissures, two pyramids, a tongue with wings, a spigot, a nodule, a uvula, an almond-like body, &c. &c. These, and other names, have got possession of this unhappy valley; but I hope not a fixity of tenure. I think I shall, after this enumeration, gain the admission that there are but few competent to examine this organ with due minuteness, and a full appreciation of appearances.

It is consoling to know that there have been, and are still, worthy labourers in this field of inquiry. Some may, by too hasty conclusions, be gathering unripe fruit; and putting it by most surely to spoil and decay. There are others who, after clearing away much of the fulness of rank vegetation, and who, availing themselves also of the prepared ground, have sown, and are sowing, seed, which may be slow in growth, requiring much irrigation of industry and talents, and many genial minds, before it ripens into fruit, yet it will assuredly become fit to be gathered, and time must disclose who shall be the reapers.

The sphere of surgery admits the full importance of pathological anatomy. Scarpa says, the brilliant progress which surgery has made in modern times is only the result of pathological anatomy; that is, of exact comparisons of the natural state of our organs, with their different diseases; and that it is from the same source that the most rational curative means with which modern surgery is enriched are deduced, as so many corollaries—methods to which we are indebted for the perfection of operations.

The surgeon, before he commences an operation, likes to feel assured of the exact nature of the disease. Before he makes his incision, he reflects on the changes of relation, of form, of texture, of appearance, which may have been induced in the part by disease. To appreciate these he must refer to morbid anatomy.

Pathological anatomy suggested to John Hunter the right treatment of aneurism; to Dupuytren, the cure of artificial anus; to Scarpa, it explained the cause of hæmorrhage after operation for inguinal hernia. How much has been accomplished by it, in reference to diseases of the joints, in our days, in defining the character, in locating the seat of the diseases, and in identifying them structurally; thus leading to more successful modifications in the plans of treatment. But I am satisfied we have not yet approached the confines of the maximum of benefit to be derived from treatment of joint diseases. An amputation is but the admission of inability to cure a disease; the higher praise rests in the successfully avoiding the mutilation; and many limbs, which formerly would have been amputated, are now cured. Excision of joints accrues from observing that the disease is frequently, nay very generally, confined to the immediate neighbourhood,—a fact ascertained by morbid anatomy, and its consequences not yet carried out to their fullest extent.

How many emasculations are now avoided by a more exact observation and recognition of the diseases of the testicle. A few years ago, it was a common thing to see the testicle removed; now, however, in consequence of our more accurate information as to the character of its diseases, cases are so successfully treated without the knife, that an amputation of the testicle has become a comparatively rare operation.

Look at what was accomplished through pathological anatomy, associated with symptoms during life, by the energetic mind and able hands of Sir Astley Cooper: his works on hernia, diseases of the breast, and testicle, replete with sterling merit, bespeak the results. The community experiences the advantages, the benefits, of his researches.

Recent pathological investigations have shewn surgeons that ultimate success, in most operations, depends more on the proper selection of cases, and their subsequent treatment, than upon the completion, or immediate effect, of the operation itself. The causes of death, after operations, are generally concealed in visceral disease. Death seldom happens from the operation itself; and pathological anatomy, or post-mortem evidence, points distinctly to the kidneys, the lungs, and the liver, as the organs

which most frequently determine the fatal issue; need I do more than ask you to consider how many important suggestions arise out of this evidence. How many deformities are now remedied by acting upon the pre-acquired necroscopic fact, that a distorted joint is not necessarily a diseased joint, but a secondary effect of contracted muscles? What has led to that diversity and inequality of opinion, now discoverable, as to the propriety of the operation for strabismus—an operation, which has added much to our usefulness, and so added another laurel to the profession, by enabling many persons to see their way, in this world, better and straighter than before? But time has shewn, as connected with this operation, that there are many persons who have a right to complain of that sudden ebullition of professional anxiety to improve the appearance of mankind, which induced some surgeons to seek after, and solicit, this operation, and by which patients were led to submit to it. These patients have suffered from that prevoyance of success and reputation which led those peculiarly philanthropical operators to believe they could mesmerise, and annihilate for ever, by the touch of the knife, every species of visual obliquity.

Why has this operation disappointed so many of its admirers and advocates? It results, in my opinion, in a great measure, from the treatment being directed solely against the symptoms, without reverting to the causes of that want of harmony of action, and of that deficient equipollence, which may have induced the obliquity.

It may be adduced, as another of the advantages to accrue from the study of morbid anatomy, which points out the causes of strabismus, as numerous, differing, and various, and requiring not an uniform, but a discriminative, and an adaptive treatment.

As regards the operation most recently before the profession and the public—that of removing ovarian tumors. The propriety of the attempt originates in the pathological facts, that ovarian disease is often a simple cyst; that even when malignant, continues for a very long time an isolated disease; that the surrounding structure may remain unimplicated in the same disease for several years, although the ovarian tumor itself may be far advanced.

But this is an operation which is very likely to be thrust back again into obscurity, if not by other more legitimate and natural means, certainly by its over zealous advocates, who do not take into due consideration the varieties of ovarian disease, its varying associations with different periods of life, and numerous other contingencies.

There are those, who now look upon this as a fixed and settled operation, as an operation justifiable, by having already a proportion of success as great, to the whole number, as other important operations. Applying statistics, where they appear to me to be most inapplicable, namely, to the determining the treatment of disease, I would remind those who employ the statistical reasoning as their oracle, that it necessitates that every case, unsuccessful, as well as successful, shall have been published, which may not be the case.

To apply the numerical method to this, or any other operation, it infers that every case shall be known to the person who is to draw the inference: it ought to infer also that all the cases were sufficiently alike to be grouped together. Suppose these, and a number of other considerations, granted, and brought by the numerical enthusiast to determine in his mind the propriety of an operation, any result at which he may arrive can only apply to that which is past; it cannot, by any fine drawing, or by any distortion, be made to influence any *certainty* as regards the very next case which may present itself. That will be a fatal or successful case, obviously independent of any thing which may have preceded it. Each case must be treated on its own intrinsic merit.

To make statistics available in the prospective treatment of disease, you ought to have, what it is impossible to obtain, the definite number to calculate from, perfect similarity throughout, in those cases already past, and a complete certainty of an exact correspondence in all the cases to come. It is to my mind a fallacy, to treat practically, medical or surgical cases, or to attempt to determine the propriety of any operation by statistical inferences alone: the inferences may look well on paper, but they are too much on the surface of cause and effect to add any thing satisfactory towards a right and safe conclusion.

As well might the cosmologist, for the purpose of instruction, expect to ascertain the exact position and relative quantity of earth and water composing the globe, by cutting out, with the greatest diligence and extremest nicety, the different portions of each from a map. He would know nothing of the depths of the rivers, or the heights of the mountains; nor would he, by such means, make himself acquainted with those treacherous shoals and quick sands buried in the restless ocean, but ever ready to ingulph the unwary; nor could he indicate those death-striking upheaved rocks, or coral reefs, which lie submerged in the wild waste of waters, and become the great danger to secure and safe navigation.

Our general monitor will not allow me to do anything like justice to the conclusive evidence which pathological examinations present, of the unintentional but fatal in-

juries inflicted upon patients by the empirical, unscientific, force-employing treatment, of stricture of the urethra.

Many persons think that a little blood lost during or after the passage of the catheter, for retention of urine, or of the sound, for the cure of stricture, is of no importance, nay, rather beneficial. The introduction of the sound or catheter, to be harmless, ought to be bloodless; and every drop which escapes is the mark of undue force.

I wish I could induce those persons who compete with stricture of the urethra, *vi et armis*, to think, and reflect a little, upon what they are doing, when, as they term it, they are trying to overcome a stricture, and lastly succeed; not by going through the stricture, but by tunnelling the walls of the urethra.

To those, who, in spite of all obstacles, will always succeed, or will never fail or be foiled in passing a catheter, when prompted more by personal vanity than by the *necessity or emergency of the case*, I would say, beware of producing a state of things certain to eventuate in those incidents of mischief which every man ought to try to avert; and which must be deeply lamented by those who have contributed to their occurrence, when unavailing, and beyond the reach of remedy.

To those who persevere in bringing about such direful results, and who cannot, or will not, hear the still small voice of reproving conscience, let me urge upon them the solicitations of pure humanity, which begs for more gentleness from their hands.

These are a very few small fragments, from the great mass of daily acquirement, which I have thought right to detach, for your consideration; and although they have been most imperfectly displayed, I hope they carry with them the evidence of some of the advantages to be derived from the study of pathological anatomy associated with symptoms during life.

But in pathological investigations we must not be satisfied, or think our task completed and concluded, with a minute examination of the solid products of disease, however carefully displayed by the scalpel of the most expert dissector. If we resolve to ascertain the origin of the minute changes which structures have undergone in disease, or the causes of the more obscure and general affections, and to fix with human certainty the constitutional treatment of disease, we must carry our inquiries into the preceding agent or pathogenesis. We must solicit, with patience and endurance, more exact information regarding the functions of the nervous system, the healthy and unhealthy constitution of the blood, and other animal fluids. The study of molecular changes in structure, and of the alterations taking place in the animal fluids, is but a more refined species of anatomy.

The mechanical process of the scalpel being here inadequate, the microscope, and the exact process of analytical chemistry, are to be made available in detecting minute variations in the solids and fluids, which must otherwise have escaped our notice. But to the still inquiring mind it is obvious, that, although morbid anatomy, thus carried out, may be the cause of the symptoms of a disease, it will show us only the changes which fluids or solids have undergone—the results of an antecedent agent, the effects of abnormal action, produced during life by and through matter under the influence of vital endowments: and here I would remind you, we have reached or gone beyond the limits of certainty, and we must invoke to our aid, as a means of comprehension, general physiology, or our imperfect knowledge of the laws of organized and living bodies.

The inquirer into such ulterior investigations has to deal with the complex properties of matter in their most complicated form; matter whose composition surpasses his intelligence, matter which the chemist may be capable of analysing to a very minute degree, even to what may be to him its constituent ultimate elements, yet, notwithstanding the tremendous progress made in animal chemistry, he (the chemist) must admit that he wants the chemical proof by synthesis—that his science is perfectly inadequate to the reformation, or reproduction, of any of the organised solids or fluids. It is, in fact, matter interwoven with the properties of unsubstantial life, held together and controlled by a law known only to the Law-giver. If the most astute mind should attempt by experiment, or the microscope, the search for first causes, the genesis, when he imagines himself actually at the focal point of his long and arduous observation, at the moment he invests himself with the hope, and probably the belief, that he is at the very threshold of the hidden truth, the vital principle which contains the solution of his difficulties baffles him; collecting all his mental vigour, and art-full appliances, he strives, as it were, to seize the wished-for treasure by force. But, alas! the human energy which he employs, and the transient violence which he uses, defeat themselves, and the body dies, that it may preserve the secret of its life—known only to Him whose extent of knowledge is infinite.

Those theorists who maintain most strenuously the possibility of tracing the phenomena of life to the influence of physical or chemical agents, are constantly obliged to suppose a mode of agency altogether different from any yet known in physics or chemistry, and so, unconsciously, allow, what no efforts can avoid or conceal, the vast but inscrutable chasm between chemical and vital affinities

—between mechanical and vital forces. Into this unfathomable depth our science has, as yet, cast no ray of light, nor reason caught sight of any general law by which it may securely hold. Human science, conscious of its own insufficiency, stands aloof, in mute admiration of that rule of action by which development, assimilation, and secretion, are made the living manifestations. Notwithstanding this impassable boundary formed by an element inappreciable to our senses, it is within the sphere of human intellects, by the aid of inferences drawn from experiment and observation on appropriate facts, so to construct a science which, necessarily imperfect, susceptible of constant improvement—hence a continuing stimulus to mental exertion—may, by the process of induction, be made capable of identifying and indicating sound principles competent to direct the judgment.

In conclusion, I must add, there seems to be a law wisely prefixed for our improvement, that after the phenomena of life shall have quitted their temporary habitation on earth, the physical signs of previous disease should remain for a period almost stationary. Would it not have been as easy for Omnipotence to have converted the material body into thin invisible air at the same instant with its death, as to have created it? Must it not, then, have been preordained that a certain, but undefined, time shall intervene between the full development of those chemical laws and affinities which regulate, *by slow degrees*, the disposition of inanimate or dead matter. It is from the dead body we are to draw our first principles. We can reflect upon the superaddition of life to matter, and, by reasoning upon it as if endowed with life, *hope to come to right conclusions*. When we approach the consideration of life itself, or the spirit, we are self-restrained by our finite reason. All is darkness to the human understanding. We know not how the union was produced at first, nor do we know how it happens that the blow which prostrates the body, and imprisons it in the grave, gives pinions to the soaring spirit, crowning it with freedom and triumph. We believe the soul is destined to live

> "Unhurt amidst the war of elements,
> The wreck of matter, and the crush of worlds."

But, gentlemen, these are mysteries locked up in the omniscience of the Creator. They are as inscrutable to the sage as to the savage—alike to the philosopher and the uninitiated. They are left, and no doubt purposely, to make us set only a right value upon all human science; and, while they form the groundwork of man's future happiness, forcibly point to him, that his proper and legitimate path to it is, through the gate of humility.

ON

DIFFERENT FORMS OF GRANULAR DISEASE OF THE KIDNEY.

By J. D. Heaton, M.D.

[Continued from page 645.]

(For the London Medical Gazette.)

John Smith, age 44, admitted under Dr. Thompson, June 30, 1841; a married man, by occupation a brass turner; of middle stature, and stout conformation, having a pale sallow complexion and bloated appearance. An habitual gin drinker for many years; at one period taking as much as a pint and a half of gin per diem. Latterly he has not drunk to so great excess.

He has been under Dr. Thompson's care more than once previously for dropsy, in connection with albuminous urine. The last time he was in this hospital was in September, 1840; he was dismissed cured of the dropsy, but the urine still containing albumen. For some time after this he remained apparently well, except that his feet were occasionally œdematous, and he has passed an unusually large quantity of clear pale urine.

A month ago he was attacked with violent headache and sickness; the face became much swollen, and the whole body was soon dropsical. (This is likewise the way in which his former attacks of illness commenced.) The urine became very scanty. He had no pain in the loins, but lost strength very much. Before admission to the hospital he had taken some hydragogue pills, and had been cupped in the loins.

When admitted, the subcutaneous cellular tissue in all parts was œdematous, and there was much fluid in the large serous cavities, producing in the chest very distinct ægophony. The skin in most parts was tender and uneasy from the distension. He had no headache at this time, but seemed languid and generally very drowsy. His appetite was pretty good. He had much thirst. Tongue thickly furred; bowels much purged by medicines previously taken; urine scanty, (about lb. j. in twenty-four hours), pale, limpid, slightly acid, throwing down a copious flocculent deposit of albumen on adding nitric acid or applying heat. Specific gravity 1015. Pulse 80, full and hard; skin dry.

℞ brachio mitte sanguinis ℥xvj.

℞ Hydrarg. Proto-Chloridi, gr. iij.; Opii, gr. j. M. ft. pil. post venæsect. sumenda.

Cras mane sumat Haust. Nigrum.

The next day the coagulum of the blood which had been drawn was firmly contracted, and much buffed and cupped; the serum

was very lactescent; it had a specific gravity of 1025. The pulse still retained its character of hardness and fulness, the urine was not in any way altered, and other symptoms remained much as before.

He was ordered to take a grain of calomel, with one grain and a half of pulv. digitalis, every eight hours, and a mixture consisting of the infusion of diosma crenata with a little nitrate of potash. Also, to be bled again to 16 ounces.

The blood drawn presented the same characters as before. The pulse became smaller, but still hard and resisting. Other symptoms not altered.

On the 5th July he first complained of a severe pain in the loins. The urine still pale and copious, and very albuminous, having a specific gravity of 1015. The body universally anasarcous. The patient very drowsy constantly. No appetite; much thirst; tongue thickly furred. Gums affected by the mercury. Pulse hard and resisting.

Omitte pilulas. Perstet in usu misturæ, et adde Tr. Digitalis ℿx. sing. dos.

E lumbis ope cucurbit. cruent. mitte sanguinis ℥xx.

The cupping relieved the pain in the loins, but the symptoms seemed generally to be becoming more unfavourable. On the 7th, the abdomen was so much distended that paracentesis became necessary: about six quarts of fluid were evacuated, very gelatinous, and forming a soft coagulum as it cooled, which was subsequently re-dissolved. The patient was constantly in a state of drowsiness approaching to stupor. The urine highly albuminous. From this time till death the symptoms presented little variety. The last few days of his existence were passed in a state of constant stupor, from which he was not easily aroused; but the evacuations were never passed unconsciously. The urine was not suppressed, though scanty, and remained albuminous to the last. The wounds formed by venesection and tapping (which was performed a second time) shewed no tendency to heal, but formed large sores, discharging a thin acrid matter, excoriating the surface around.

He died on the evening of the 28th.

The body was examined 33 hours after death.

On opening the thorax, a large quantity of yellow serum escaped: there were no inflammatory appearances of the serous membrane. The lungs were much congested, and discharged much serum when incised, but crepitated when compressed. There was no tubercular lesion in either lung, but there was much cretaceous matter, and black melanotic deposit, in the bronchial glands at the root of the left lung, and of melanotic matter simply on the left side. The pericardium contained about an ounce of serum. The heart was free from disease.

The abdomen was filled with serum. The peritoneum appeared healthy. The liver was slightly enlarged: the whole surface was of a very dark lead colour, probably the effect of some cadaveric exudation of sulphuretted hydrogen, as the discoloration was quite superficial. A section of the liver presented a rather paler and more yellow colour than natural: the substance was more hard and friable than usual. The spleen had the same discoloration of the surface as the liver, but appeared healthy in other respects. The kidneys were rather smaller than natural, the right kidney being rather the larger; both presented the same appearances. On stripping off the investing membrane, the surface appeared very uneven, but not distinctly granular; it was unusually pale, being of a dirty cream colour, speckled with numerous small dark grey spots. On the convex margin of each were a few rather large flat vesicles, containing a dirty brown fluid. The colour of the surface extended through the substance of the kidney; a few black spots were seen on the section. The cortical and medullary parts seemed to preserve their natural proportions; each seemed to be pervaded by an albuminous deposit, superseding in a great measure the healthy structure, apparently devoid of vascularity, on which depended their want of the natural colour; but there was little appearance of granulation. The right kidney weighed 4 oz. 6 dr.; the left, 4 oz.

The brain presented some opacity of the arachnoid, and softening of the optic thalami and corpora striata. The arteries were free from disease.

This is a good illustration of the ordinary progress of a fatal case of albuminuria, uncomplicated by other diseases, and free from many affections frequently associated with, though not essential to the malady in question.

It is very probable that the disease took its origin from the habits of intemperance to which the subject of it had long been prone. The regular progress of the disease, though it does not render the case less valuable, presents little opportunity for comment. The attack which ended fatally was the last of numerous exacerbations of a disease which had been slowly progressing for a length of time. From the period of his admission the symptoms were so serious, that a fatal result was anticipated. The bloodless but sallow complexion shewed a great diminution of the red globules of the blood, which is one important consequence of this disease. The constant presence of albumen in the urine clearly established the true nature of the malady. The dropsy was the most

ostensible and distressing of the symptoms, and that one which, some years ago, would alone have attracted attention. The very hard full character of the pulse was peculiar, and suggested the frequent depletions which were practised. But neither this nor any other treatment at all stayed the progress of this attack, though others had been benefited by similar means. The last few days of the patient's life presented that oppression of the senses and stupefaction which most frequently precedes death in this disease.

The only additional circumstance which seems to demand remark, previously to the post-mortem examination, is the appearances presented by the blood. The firm, strongly contracted crassamentum, with its buffy coat, might seem to imply an active inflammatory state of some organ. But the clot was unusually small, even taking into consideration its firm contraction; and both these, which are the usual appearances of the blood in this disease, may be well explained by a circumstance to which we have already alluded, viz. the great reduction of the number of blood globules, which, being less abundantly interspersed amongst the fibrine of the clot, explains its diminished size, and, at the same time, allows it to contract more forcibly, so as to render the clot more firm, and give it the cupped and buffed appearance usual in inflammatory diseases.

The examination after death shewed, as might have been expected from the symptoms during life, that the kidneys were the principal seat of disease. These organs were exsanguine, from the morbid deposit which gradually takes place of the natural vascular structure; they were somewhat contracted, though not to any great extent. The granular appearance was less distinctly marked than is usual; but there could be no doubt as to the true nature of the disease, for the other appearances of these organs, as well as the symptoms during life, were all those of granular kidneys. The numerous black spots interspersed in the substance of the kidney seemed to be a punctiform melanotic deposit; and, taken in connection with a similar deposit in the lungs, in larger quantity, might imply a tendency to disease of this nature. The black discoloration of the liver was so superficial, as more to resemble a stain than a morbid structure; but the paleness of its substance, with increased fragility and somewhat enlarged size, seemed to depend on a morbid albuminous deposit, similar in nature probably to cirrhosis in this organ, or to the granular degeneration itself of the kidney.

In other instances, besides the one under consideration, we have found more or less softening of the brain in connection with granular degeneration of the kidney; but whether this is to be regarded as more than a merely accidental coincidence, we are unable to determine.

ADDITIONAL REMARKS ON SUPPRESSION OF URINE.

By J. C. Hall, M.D. &c. &c. &c.

(For the Medical Gazette.)

In his very interesting paper on this singular disease, Dr. T. Thompson remarks—"In a considerable proportion of instances, as in those described by Sir H. Halford (Essays and Orations), Dr. J. C. Hall, and others, death has occurred within three days from the commencement of the suppression." On turning to the case recorded by me in the Medical Gazette,* and also in my recent work†, I find that the patient recovered, after the suppression of urine had continued forty-two hours: in the majority of cases, however, coma and death take place in from three to five days. It becomes a question of some interest to discover the greatest length of time a patient has survived with a complete suppression of this fluid; for be it remembered, there is a marked difference between those cases in which no urine is secreted, and those in which the discharge is not altogether wanting. "Here there is a great difference in the hazard of a patient's situation, whether the kidneys separate a very little urine, or none at all:"‡ in the first case he gradually recovers, in the second very rarely. In Dr. Thompson's case the state of the brain was not examined, but in a case recorded by Dr. Elliotson, a man was attacked with anuria attended by hemiplegia, and that drowsiness which is always present after this disease has existed for some time, and which leads us to infer—that is to say, the apoplectic symptoms ushering in death—the urine is re-secreted into the ventricles of the brain, but in the case at present before us "nothing of the kind was discovered; there was not only no urine in the head, but no excess of fluid, either in or upon the brain: that was a result for which we were not prepared."‖

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* Medical Gazette, 1840.
† Clinical Remarks, &c. &c, p. 186.
‡ Dr. Baillie.
‖ Principles and Practice of Medicine, p. 1119.

The right kidney in Dr. Thompson's case was enlarged, and "Dr. Daniell thought he could detect a slight degree of mottling."* Dr. Bright remarks, "that in cases of granular degeneration of the kidneys total suppression of urine but seldom occurs." We, however, must conclude, that various states of the system, both in health and also in disease, have an effect on the secretion of this fluid, which appears to contain elements, the longer continuance of which in the blood than natural, always produces disease, and the total suppression of their elimination death, the last hours of the patient's life being attended by symptoms denoting some affection of the brain. I quite agree with Dr. Thompson in thinking the evidence of the transference of the urinary secretion in some cases sufficiently suspicious to render it necessary to examine it with care, and to receive many of these wonderful stories with caution. In addition to the cases of Nysten Valisneri, and Marangoni†, to which allusion is made, Dr. Parr mentions a case where no urine was made for six weeks‡, and Haller quotes an instance in which it was said no urine was made for twenty-two weeks. But the truth of this last case may fairly be doubted, for Haller does not give it on his own authority, but on that of some other person§, and it is folly to suppose that the constituent principles of so important a secretion as the urine can long remain in the system without the greatest danger. Dr. Mason Good remarks, "the outlet at which these are separated and discharged is not always apparent, and hence they appear not to be separated at all." If, however, a practical and accurate pathologist make the examination, the vicarious channel will frequently be detected. In Dr. Parr's case, there was a profuse sweat; in Dr. Richardson's, the patient laboured under constant diarrhœa. A case is recorded by Dr. Arnold, of a girl, who had retention of urine for two years, and through whose skin a fluid like urine escaped; and on one occasion, when the catheter was not used for many hours, a fluid like urine was discharged from the right ear, first in drops, and then in a larger quantity*. It appears perfectly clear, in some few cases where no urine was secreted, and in others where the fluid was retained, that patients have vomited a fluid bearing the taste, smell, and all the other qualities of urine; and others have passed it, as in Dr. Parr's case, by perspiration. It is reasonable to conclude with Dr. Elliotson, "that in the latter case the fluid has been absorbed and re-secreted, and in the former case it has been secreted originally, and has not been absorbed at all."†

Respiratory and intestinal exhalations, as well as cutaneous transpiration, exert a marked influence on the secretion from the kidneys; in fever, in small-pox, malignant cholera, after accidents and surgical operations, we have more or less (as the case may be), a diminution of the secretion of urine. When my remarks were printed in the Medical Gazette four years ago, on this disease, Sir B. C. Brodie favoured me with a note, which I venture to quote, as it abounds with that sound practical information for which the lectures and writings of this distinguished surgeon are so remarkable. "I have read your paper on the suppression of the secretion of urine with much interest: in the great majority of cases of this kind I have seen, there has been some obstruction to the flow of urine, and it is curious to remark how a calculus blocking up one ureter, or a tumor pressing on one ureter, will sometimes stop the secretion of urine in both kidneys. In one case there was a very large prostate, which probably closed the orifices of the ureter, but the body was not examined after death. In another case there was a medullary fungus of the mucous membrane of the bladder, producing this effect. I had a patient with enlarged prostate, which prevented his emptying the bladder. For some time he had not secreted more than half a pint of urine daily, but the secretion was trebled on the catheter being used two or three times daily."

I recorded a case in the Medical Gazette some time ago, which I attended with my much respected friends,

* Medical Gazette, January, 1844.
† Memoires de l'Academie des Sciences, 1715.
‡ London Medical Dictionary.
§ Bibl. Med. Pr. 11, p. 200.

* New England Journal of Medicine and Surgery.
† Bibl. Med. Pr. p. 1119.

Messrs. Carruck and Pollock, of Kensington, in 1837. When I saw this lady, October 1st, the urine was fœtid, and of a dark colour, often containing long strings of blood: she complained of "great pain in the loins," and could obtain little rest, night or day. These symptoms continued until the last five or six days of her existence, when the urine, which had daily diminished in quantity, ceased to be secreted; none was passed, nor did the catheter detect any in the bladder. Twelve hours after death I assisted Mr. Pollock in the post-mortem examination: we found extensive disease of both kidneys, particularly the right, which was one fungoid mass.

The effects of a suppression of urine consist in a declining energy and growing torpitude, clearly proving that the brain is directly weakened, and rendered incapable of supplying nervous energy. Mr. Campbell remarks, "it is not difficult to account for these effects, as they naturally follow from the blood being charged with that excess of azote which it is the office of the urine to carry off."* I may here remark to the student, that suppression of urine may be either functional or arise from some organic disease of the gland itself: the constitutional symptoms, however, do not vary in either case, and according to my experience death takes place precisely in the same manner.

The cases, however, to which I more particularly, at present, wish to refer, are those in which, independent of any derangement that is apparent in the structure of the kidneys, their secreting office is completely suspended. This peculiar condition constitutes the disease to which Dr. Willis has given the name of anuria, said by him to terminate in coma in four or five days, and in death in a few days more. I am, however, of opinion, that, as a general rule (of course, as in Dr. T. Thompson's case, there are a few exceptions), death takes place in a much shorter period; that is to say, in cases where no urine is secreted by the kidneys, and no other organ furnishes an outlet for it. Dr. Elliotson mentions a case where urine was vomited; in another, he continues, "I saw it pass from the skin, particularly the palms of the hands." Dr. W. H. Carter mentions some cases* in which the patients were relieved by vomiting a fluid resembling urine in colour, yet altogether void of urinous smell or taste. Dr. T. Thompson remarks, in the interesting paper in the Medical Gazette, to which reference has already been made, "In the present example, no urinous odour was detected in the matters discharged; and, as a general rule, in cases of ischuria, it does not appear that vomiting and diarrhœa have averted or retarded the occurrence of coma." With every deference to the opinion of this gentleman, I am inclined to think the cases already quoted from the Cyclopædia of Practical Medicine, as well as the cases mentioned by Dr. Richardson and Dr. Parr, lead to a different conclusion; nor can I agree with him in thinking, "we have no conclusive evidence of the transference of the urinary secretion." One of the most singular cases of vicarious discharge is that quoted by Sennectus, from Platerus, of a girl, thirteen years of age, in whom the secretion of the kidneys was compensated by a very copious flow of serous fluid from the right ear, which continued during several days†. (The Editor of the Medico-Chirurgical Review‡ mentions a case which fell under his own observation; in this case it was quite impossible to practise deceit; the catheter was passed every day, but only a few drops of blood followed. There was no affection of the head, nor is any mention made of increased perspiration or diarrhœa.) Still, I cannot help thinking with Dr. Carter, "a more critical examination in all these cases would have led to the discovery that some urine was passed—it may have been a very small quantity—but that some urine was secreted or passed," or, at any rate, that the system was relieved by some other outlet; for after the case mentioned *as seen* by Dr. S. Arnold, and the observations of Dr. Elliotson—"I know instances where urine has been vomited; I saw a case where it passed from the skin"—it is quite impossible to doubt the truth of these cases, which prove the transference

* Lancet, 1840. I may also refer the reader to the very interesting experiments of M. C. Chossat, who has endeavoured to determine whether the blood of persons labouring under anuria be loaded with azote.

* Cyclopædia of Practical Medicine, p. 892.

† The Medicina Practica of Sennectus, lib. iii. c. 10.

‡ 1833.

of the urinary secretion. In some cases of ischuria renalis a very strong urinous smell is perceptible before death, which clearly proves an attempt of nature to convert the exhalants of the skin into a substitute for the palsied kidneys, but without complete success. Speaking of the cases of Dr. Parr, Dr. Richardson, and others, Dr. Carter remarks, "If it be conceived that in these cases not a drop of urine was passed by the natural channel, or discharged at any foreign outlet; if, in a word, it be conceived that no urine whatever was secreted, might not a more accurate investigation have determined them to belong to the ischuria suppleta of Sauvages?" "It may be proper, in this place," continues the same writer, "to say a few words respecting this latter variety of ischuria renalis, in which the want of the secretion in the kidneys is compensated by a vicarious discharge, as also of that variety in which urine itself is thrown off by some foreign outlet. Cases of either description are uncommon; and, among those which have been published, some, perhaps, have been simulated; yet a sufficient number, distinctly related, and by writers of good authority, remain to entitle the ischuria suppleta of Sauvages, and the paruria erratica of Dr. Good, to our consideration*.

With regard to the duration of the disease before death takes place.—I now speak of complete suppression of urine†, for, as Sir Henry Halford observes, a very small quantity of urine is sufficient for the exigencies of the constitution: in the case recorded by him (in the Med. Trans. Vol. VI.), the man died in about two days. Mr. Campbell's case died in little more than twenty-four hours; he found him feeding his cattle the day he was called to see him—the next he was dead. Dr. Carter states, "death takes place about the second or third day from the commencement of the suppression. In the case I recorded (Medical Gazette, 1840) of J. Lambert, under game-keeper to the Earl Spencer*, no urine was secreted for forty-two hours (not one drop, as was proved by the repeated introduction of the catheter); and I am not aware of any case in which a patient has recovered when the disease has continued longer than this, and when symptoms denoting an affection of the brain were present. Dr. Elliotson mentions a case attended by the late Sir A. Cooper, and two others by "a friend," in which recovery took place, but the duration of the disease is not mentioned, nor the treatment.

In our treatment of this disease, our utmost efforts to rouse the kidneys to renewed action often fail; we must, however, endeavour to relieve both the vessels of the brain, and also of the kidneys (which, in idiopathic suppression of urine, are probably congested), by general bleeding when the patient can bear it, or, when less plethoric, by cupping; the abstraction of blood should be followed by a brisk purgative, the internal exhibition of cantharides and diuretics, the application of a large blister to the loins, and an enema of oil of turpentine and castor-oil. In all cases the warm bath is, as Dr. T. Thompson well remarks, useful; it is a disease, of all others, requiring the most prompt and energetic measures: in a case of life and death no time is to be lost.

Grove Street, East Retford.
Feb. 6, 1844.

* Page 192—*ισχουρια*, a suppression or retention of urine, from *ισχω*, to withhold or retain, and *ουρον*, the urine.

† Let us keep in mind that the generic term ischuria has been employed by medical writers in general, and also by professed nosologists, to designate two very different affections. Ischuria has been termed by Sagar "retention or suppression of urine secreted by the kidneys, or suppression of the secretion in the kidneys." Sauvages uses the term, retention; Cullen, that of suppression only, both evidently regarding suppression and retention as equivalent terms. Dr. Mason Good applies to suppression the term "paruria inops"; to retention of urine, the name of "paruria retentionis renalis."

CASES OF
DROPSICAL OVARIA
REMOVED BY THE LARGE ABDOMINAL SECTION.

By D. Henry Walne, Surgeon.

(For the Medical Gazette.)

It has already been made known to the readers of the Medical Gazette that an operation performed by me subsequently to my published cases, in which I removed a diseased ovarium, was followed by a fatal result, the only

* I saw this man last week; he is in good health, is the father of three children since the attack, and has had no return of the disease.

case of the kind that has occurred in my practice. The details were communicated still earlier to the same medical society at the meetings of which I had brought forward my first and second cases, but where I had not deemed it necessary to mention my third and most complete instance of success. To great numbers of medical men, including, I believe, every gentleman who, since its occurrence, has done me the honour personally to consult me regarding such complaints as these operations are intended to relieve, I have also given the leading particulars; and it now only remains for me to put them permanently on record in somewhat fuller detail. Through the same channels it has been made known that I have used the preliminary or tentative incision, on an occasion where extensive adhesions precluded the removal of the tumor. Before proceeding, therefore, to narrate my fourth case of removal of dropsical ovaria by the large abdominal section, I will relate the circumstances of that in which I tested the usefulness of the tentative incision; a measure which I introduced in my first operation, which I have since uniformly had recourse to, and of which other operators have, by adopting it, shewn their appreciation.

Mrs. S. H., of Poplar, aged 54 years, applied to me, July 31st, 1843, in a state of great distension from ovarian dropsy. She was the mother of five children, the youngest of them fourteen years old; the catamenia had ceased thirteen years. Her disease was supposed to have existed about four years, that time having nearly elapsed since she first noticed an increase of size, and felt a soreness of the lower part, on the left side and front of the abdomen, though she never experienced acute pain from her complaint. In December 1842, she had been tapped at one of the hospitals, and a few days after my first seeing her, viz., on the 3d of August, 1843, finding her state intolerable, she was again tapped. No very remarkable circumstances, I believe, attended or followed these operations. The liquid removed was stated to be yellowish, and like white of egg in consistence. On the 22d of August, she visited me; said she was filling very fast; felt weak, but otherwise pretty well, and had a good appetite; her complexion rather yellow; the left leg somewhat œdematous, and the right also a little swollen, but less so than the other. Her dimensions were 38 inches in circumference, and 14½ inches from scrob. cord. to pubes. The tumor, with fluctuation, rose considerably above the umbilicus.

By Sept. 5th, her dimensions had increased to 41¾ inches in circumference, and 19 inches in the other direction.

Having taken a lodging within a moderate distance of my house, for the purpose of submitting to the operation for extirpation, which, from various causes, had been postponed, she had, by the 21st, become extremely large, and the skin of the lower part of the abdomen being œdematous, it was thought right to tap her again, lest the wound should fail to heal from this cause. I accordingly drew off four gallons and a quart of fluid, of the consistence of castor-oil, very mucilaginous to the touch, and containing a great proportion of albumen, as evinced by coagulation from heat. On the next and following day she was quite comfortable, with a moist skin, clean tongue, and healthy pulse, and no symptoms of inflammation arose afterwards.

Previous to the tapping, Dr. Blundell had seen the patient; and subsequently to it both he and myself renewed our examination of her state. The uterus appeared healthy. Some circumstances led Dr. B. to suspect adhesion of the sac to the parietes of the abdomen high on the left side; but where no obvious thickening of the adherent part has occurred, it is very difficult to ascertain with positive certainty the presence of such adhesions, and when I examined the abdomen carefully, on the day before that appointed for the operation, I could distinctly move the fundus of the tumor beneath my hand, when placed above it towards the scrobiculus cordis. Lateral motion was not clearly perceptible, nor is it when a certain amount of distension has been arrived at. Up to that period distinct rotundity is apt to be wanting in cases which, like this, rapidly proceed from flaccidity to tension by hastily-accumulating fluid.

Oct. 11th.—The preparations and arrangements were similar to those in my last two previous cases, and Dr. Blundell, Messrs. Bransby Cooper, Beale, Burrows, Law, and Dr. Wylie,

of St. Petersburgh, attaché of his Imperial Highness the Grand Duke Michael of Russia, were present. The integuments, in the direction of the linea alba, a little below the points at which she had been tapped, were divided to the extent of an inch and a half; then the tendinous parts, and the peritoneum; in pinching up which the tension of the part impeded the action of the forceps more than on the former occasions. The peritoneum being entered, some adhesions were found between it and the sac, on each side of the wound, of small extent and chiefly filamentous: none in the direction of the pubes. They were very near the tapped part of the abdomen, and were therefore thought to be attributable to the operations of that kind she had undergone. On attempting to glide the surface of the tumor from side to side, little or no separate movement, as seen through the wound, could be produced. Nevertheless, I did not think it right to desist in uncertainty whether the adhesions were not so limited that they might be safely divided, or even divided at some risk, rather than abandon the patient to the sad fate of a woman labouring under ovarian dropsy of decidedly rapid progress. With this feeling, I prolonged the incison in the integuments, from a point a little to the left of the umbilicus to the first wound, and then divided from within, with the probe-pointed bistoury, the other structures upwards to the same extent; in all nearly five inches. I also divided adhesions on each side of the wound, hoping that they might prove of ascertainable limit; and this step affording me much additional means of investigating the state of matters. I made an examination with my finger on each side, but found, as I proceeded higher in the abdomen, the adhesions became wider in extent, stronger and more intimate. Dr. Blundell and Mr. Cooper were requested to convince themselves of this; and all present agreed that it was best to stay proceedings. I therefore carefully closed the wound with six stitches, laid a strip of lint along it, and over this applied supporting plaister and a broad flannel roller, just as if she had been tapped. It was observed that she had complained more than any of my former patients; doubtless the state of the parts divided caused her to experience more pain than they did.

She was put to bed about five o'clock, complaining of some smarting pain at and near the wound. At nine that evening she still felt the same kind of pain, but in less degree, and had a pulse at 94: 80 being her ordinary pulse. The temperature of the room was 70. She had slept without an anodyne, and her skin was temperate and moist. No shivering nor chilliness had occurred, and she felt nearly as before the operation, except being much dejected at the circumstance of its not being completed.

Tea and toast-water, but nothing else to be taken.

12th.—Slept a good deal in the night, and feels better to-day, both in the wound and in herself. Has some soreness, but scarcely any pain: pulse under 90: skin perspiring gently: tongue moist: no general tenderness of the abdomen: passed her urine readily. Took only a pint of toast-water in the night. I visited her at 8 A.M., 1, and 11 P.M. At the last visit I found her pale and faintish, with a pulse at 100: tongue moist and clean: skin freely perspiring and temperate: free from pain, but a small part of the abdomen, near the wound, tender. The abstinence before and since the operation, and the warmth of the room, were evidently exhausting her, whilst the drain of the disease was not discontinued, as in my other cases, by removal of the secreting surface. Under such different circumstances I ordered her a glass of port wine, and then some toasted bread moistened with hot water and wine; and in the night she took some sago with wine.

Next day, 13th, her pulse was at 92. She had a clean tongue; a pretty good appetite; and as no fresh symptom had presented, mutton-broth, and tea and toast, were allowed; and at night, at her own desire, sago with wine again.

On the 14th her own report was, "nothing is the matter, only the place is a little sore." I tried the sides of the abdomen, and found no tenderness.

15th.—Dressed the wound, taking out the stitches: only about two drops of pus, near the umbilicus.

17th.—Again dressed the wound, and found that the distension of the abdomen, from her increasing size, had

caused it to gape for nearly two-thirds of its length, where I had hoped it was united: scarcely any pus. The gaping superficial; but sufficient to raise the question if tapping may not be necessary. The peritoneum, nevertheless, is shut by the parts laid down upon the cyst being adherent to it, and the deeper-seated textures of the line of wound united. Lint laid along the wound, and long supporting plaister carried over it, from side to side of the abdomen: the bandage firmly applied to the lower part of the abdomen, and complete freedom from pressure allowed above, by which the expansive power may there have vent, whilst the wound is preserved in contact, and its healing favoured.

18th.—Wound again dressed. The plan adopted appeared to be answering, and the tapping was accordingly deferred.

27th.—The wound having continued to heal steadily, was now almost perfectly cicatrized. She required to be tapped, and was anxious to return home. Four gallons and a quart of fluid were drawn off, and no unusual symptoms followed.

Nov. 2d.—The wound being soundly healed, and being herself as well as she usually has been after being tapped, she returned home. Twice since she has required tapping, viz. on the 27th of November, and the 26th of December. On each occasion upwards of four gallons of fluid, of the same character as before, were removed. Previously to the last of these operations, her distress from distension was much greater than heretofore; sleepless nights and general restlessness, retching and shortness of breath, rendering her life one continued scene of discomfort for several days. She is extremely anxious to be relieved, if possible, permanently; and is willing to incur the risk of almost any experimental measure. I have not thought it right to employ any.

A few practical remarks naturally arise out of the particulars just related; and they are of a satisfactory character in reference to the proceeding employed. The impunity of the measure affords a strong confirmation of the correctness of the principles on which these operations are based. As far as one case goes to shew it, the mere opening of the peritoneum, at a point rendered remote from the viscera by the interposed bulk of disease, would seem to be a step attended by little risk, and may therefore be resorted to for information in obscure cases, as well as properly adopted to confirm the most assured diagnosis in those that are more clearly marked. When the disease has acquired great magnitude, a circumstance at present very common, the difficulty of ascertaining the presence or absence of adhesions to the peritoneum of the abdominal parietes is such, that mistakes are not unlikely to be made even by the most experienced. Various particulars of the history, &c. of cases assist in forming a probably correct opinion; but certainty seems hardly attainable without other than ordinary means. In the tentative incision we have a valuable auxiliary, and one which will, I think, always enable us to know if very broad and close attachments to the fore part of the peritoneum, where alone such occur, exist. Filamentous and band-like adhesions, elongated by the effect of motion, can be so easily dealt with in the major operation, that the ascertainment of their presence seems a secondary consideration. Somewhat close attachment to the moveable viscera may, however, exist without evidently restraining the mobility of the tumor. Nothing therefore supersedes the necessity of carefully studying the minutest anatomical circumstances, of a mechanical character, in each case; but the tentative incision, in addition to such study, will be found of great advantage. In making use of it, the eye and the finger are both serviceable. As soon as the incision is completed, the tumor, if not strongly and extensively attached to the parietes of the abdomen, may be made to glide from side to side, and to exhibit, at the opening, a free and ready mobility. The finger introduced ascertains, to a considerable extent, the freedom of the tumor from adhesions at a part where they are very likely to be found, especially when tapping has been previously resorted to; or discovers them, and informs the operator of their character.

Both this case and the succeeding one suggest the propriety of an earlier recourse to operation for the relief of such diseases. It is not my intention, just now, to enter upon the subject of the *causes* of adhesions; but whatever they may be, an opportunity for their

being brought into action is afforded by too great a postponement. The difficulties occasioned to operators, as well as the danger to the patient, are proportionately augmented: the former, perhaps, rendered insuperable; the latter, possibly, extreme.

REMARKS ON CONICAL CORNEA.

To the Editor of the Medical Gazette.

Sir,

My attention has just been directed to a letter in your journal of the 26th ult. from Mr. Middlemore, complaining that, in my paper on Conical Cornea, in the Dublin Journal of Medical Science, for January last, I have "overlooked his views on the nature and treatment of that singular malady, and attributed to others suggestions in reference to treatment which are due to him."

I have carefully endeavoured, throughout my paper (and I hoped I had succeeded), to award *suum cuique*. If I have failed in the attempt, my intentions must plead my apology.

Mr. Middlemore says, I have "omitted to state that he has considered conical cornea to be the result of a change effected in the cornea by the modifying and arranging powers of the absorbents."

I beg to assure Mr. Middlemore that I did not "overlook his views on the nature of the malady;" but, as I considered that they neither account for, nor explain the pathology of, conical cornea, I did not add, unnecessarily, to the very abundant proofs I adduced, that this was not understood.

I may perhaps be permitted so state that my theory of the disease is, that it "is analogous to hypertrophy, with dilatation, of the ventricles of the heart, and to aneurism" (p. 385); that it is "the product of growth" (p. 384); and is caused by impaired nervous energy of the membrane itself, the effect of which is, faulty action of the absorbent and nutrient vessels of the cornea. In other words, that "gastric or intestinal disturbance or irritation induces, through the medium of the par vagum, sympathetic, and ciliary nerves, faulty action of the absorbent and nutrient vessels of the cornea, the combined effect of which is conical cornea" (p. 385); that thinning of the cornea internally would result from over activity of the former, whilst increased deposit externally would then, of necessity, take place from the latter (p. 384): that "this increased deposit would observe the same laws as do parts which are undergoing hypertrophy, where, though the matter effused assumes, at first, the form of nucleated cells, yet each tissue exerts a different assimilating influence on it, and causes the transformation of the cells into tissue of its own kind, and not into mere fibrous or cellular tissue, as is seen in inflammation" (note, p. 385).

In short, that the local disease has a constitutional origin, and that the treatment must be directed to the "diseased growth" through the same channel, the constitution.

Upon this my successful treatment of the disease affords the best comment.

It may not be altogether irrelevant to my subject to state, that I arrived at these conclusions by reasoning from effects to cause. Emetics, with purgatives, cure the disease. How do they effect this?

The nutrition of the eye is under the influence of the sympathetic. This influence is produced by virtue of its connexion with the lenticular ganglion —(p. 382). Gastric or intestinal disturbance or irritation would induce, through the par vagum, sympathetic, and fifth pair of nerves, a corresponding degree of disturbance in the functions of the absorbents and nutrient capillaries of the cornea—(p. 385).

Morbid anatomy has afforded evidence of the increased activity of both of these functions, in the central and internal thinning, and circumferential thickening—(pp. 359, 360, 384). Emetics, with purgatives, restore the healthy action of the par vagum and sympathetic, and these, as a consequence, exercise a healthy and controling influence over the weakened absorbent and nutrient vessels of the cornea, the result of which is a slow, but progressive, retraction of the diseased corneal growth, and a consequent restoration of vision—(p. 387).

Mr. Middlemore ascribes the disease "to the modifying and arranging powers of the absorbents." Admitting, for the sake of argument, that the absorbents possess the powers attributed to them by Mr. Middlemore, I am yet at a loss to comprehend how any

amount of such powers can produce a *growth of parts*. Something more is wanting to account for its production. An American writer, Dr. Littell, goes even a step further than Mr. Middlemore, and suggests "that the disease probably depends upon some aberration in the assimilative and absorbent functions;" but this "aberration" in both functions will not explain the origin of the disease, for the aberration itself is only an effect; the cause is constitutional, the effect local.

I speak of causes and their effects; Mr. Middlemore of one only of two effects; Dr. Mackenzie of the other effect; and Dr. Littell of both effects; but none of them of the causes.

I submit, therefore, that "my views respecting the pathology of this singular disease are any thing but "an expansion" of Mr. Middlemore's, and that, therefore, on this point his observations fall to the ground.

On the other subject on which Mr. Middlemore considers it "necessary to assert his claims to priority of suggestion," I have nothing to offer beyond a statement of facts.

I found the operation detailed in Mr. Tyrrell's well-known work, published in 1840. Mr. Middlemore's name is not mentioned in connexion with it, neither is any allusion made to any "suggestions" from any other individual. Mr. Lawrence, in the second edition of his elaborate Treatise, published in 1841, refers (page 371) to Mr. Tyrrell's operation, but makes no allusion to Mr. Middlemore's Treatise, nor to his "suggestions."

The legitimate deduction to be drawn from the "scrupulously cautious and unobtrusive form" in which Mr. Middlemore gave these suggestions to the world, and from the impersonal mode of speech employed by him in his Treatise—"it has been proposed," "it is said"—was, that some other than Mr. Middlemore had *previously* "proposed," and "said." Hence, finding the operation and its results detailed in Mr. Tyrrell's work, and quoted by Mr. Lawrence, without any reference, in either case, to Mr. Middlemore, I gave Mr. Tyrrell the credit of the idea.

I am gratified, however, in having this opportunity of testifying to Mr. Middlemore's ingenuity in first proposing this operation, though, in my opinion, I repeat, its advantages are o a very limited character—(pp. 372, 373).

In conclusion, I beg Mr. Middlemore will accept my best acknowledgments for his very complimentary and flattering remarks on my paper.—I am, sir,

Your obedient servant,

JAMES H. PICKFORD, M.D.

Brighton, Feb. 5, 1844.

PHTHISIS.

To the Editor of the Medical Gazette.

SIR,

SHOULD you think the following observations worthy of a place in your GAZETTE, they are at your service.

I am, sir,

Your obedient servant,

J. W. GRIFFITH, M.D. &c.

9, St. John's Square, Feb. 13, 1844.

In making the following observations, it is my intention merely to draw the attention of the profession to a circumstance which may possibly throw some light upon the explanation of a means adopted by nature for the purpose of temporarily arresting the progress of that fearful malady, phthisis, and the consideration of whether such means might not be imitated by medical treatment.

The reader is aware of the views of Liebig on the cause of death in chronic diseases; I will, however, quote his words. "In all chronic diseases death is produced by the same cause, viz. the chemical action of the atmosphere. When those substances are wanting whose function in the organism is to support the process of respiration; when the diseased organs are incapable of performing their proper function of producing these substances; when they have lost the power of transforming the food into that shape in which it may, by entering into combination with the oxygen of the air, protect the system from its influence; then the substance of the organs themselves, the fat of the body, the substance of the muscles, the nerves and the brain, are unavoidably consumed*."

In phthisis, I believe, we have a good example of this mode of death; for in

* Animal Chemistry, page 27.

this, although a disease of the lungs, death most frequently results from exhaustion. The nutrition of the body is impeded by the disease of the lymphatic and glandular system; the circulating mass is reduced by the excessive secretion, whether from the skin, bowels, lungs, or urinary organs; consequently so much of the vital fluid is consumed, that the heart's action ceases for want of its proper stimulant. In addition, then, to the means we possess of checking the diminution of the circulating mass from diarrhœa, sweats, &c., by opiates, metallic salts, &c., some means either of impeding the action of the oxygen of the air, or supplying a matter which may "burn" away, so as to protect the vital fluid and organs from combustion, is required. The first object is gained by nature when pregnancy occurs in the phthisical female. It is well known that the progress of phthisis is temporarily arrested by pregnaney; but I am not aware that any probable explanation of such occurrence has been advanced. Such I consider to be found in the fact, that the fœtal blood being entirely supplied with oxygen from that of the mother, a quantity of that oxygen is continually removed from the blood of the latter; the vital fluid is thus protected from its influence, and the fatal termination of the malady is postponed; and probably, if such a state, or one somewhat analogous, could be maintained, the progress of the case might be retarded, the cachectic or anæmic state of the body relieved, and the pulmonary disease remedied by counter-irritants, or what not.

A number of medicinal agents tend to fulfil a second indication—such as alcohol, camphor, pyro-acetic spirit, &c.: such agents, after being taken internally, speedily find their way into the blood, and are burnt off almost entirely by the lungs. It is rather curious to find here an explanation of the manner in which pyro-acetic spirit *might* act* in relieving phthisis; and I believe that such action, if such there be, depends entirely upon an operation of this kind; and one would imagine that other remedies should act in the same way, if given constantly, in small quantities and very frequently repeated, so as to keep the circulating mass impregnated with them.

Regarding the value of pyro-acetic spirit in phthisis, I have frequently used it, and have found its effects various. In some advanced cases I have found it of no use, not even alleviating the symptoms; but in two or three earlier cases I have seen it produce great relief to the symptoms, both stethoscopic and general. In one case in particular, a well-marked one of phthisis, the progress of the disease was entirely arrested, the cough almost entirely ceased, and the patient was discharged well: he remained so for about five months, when he was again attacked with pulmonary symptoms.

* That the action of it depends upon its power of dissolving tubercles is, I think, thoroughly unfounded; inasmuch as, for such end, it should be secreted in the liquid form by the pulmonary mucous membrane, which it doubtless is not: the greater part is probably "burned" off; but a portion probably passes as vapour; but tubercle is neither soluble in carbonic acid and water, the products of the combustion, nor in the vapour of pyro-acetic acid.

TUMOR OF THE ABDOMEN.

To the Editor of the Medical Gazette.

Sir,

If the account of the accompanying case shall seem to you to possess sufficient interest, perhaps you will insert it in one of your forthcoming numbers.

I am, sir,
Your obedient servant,
Alexander R. Brown, M.D.
Cantab.

Stamford, Feb. 12, 1844.

Early in last May, I was requested to see, with Mr. Simpson, of this place, E. C. a girl, 14 years of age, of spare make, delicate appearance, fair complexion. At the time of my seeing her the countenance was indicative of severe suffering. Tongue moist, slightly coated far back. Bowels reported open with medicine. Stools loose, clay-coloured. Urine free, depositing a brick-dust sediment. Skin warm, and moist. Pulse about 80, soft. Catamenia not appeared.

She had been in ill health for two years, the greater part of which period she had been under medical treatment. Mr. Simpson had been attending her for about ten days. When he first saw her, she was suffering with intense pain in the abdomen occurring at irregular intervals, referred principally

to the left hypochondriac region, extending to the back, not aggravated by pressure. Temporary relief was afforded by full doses of opium.

On examining the abdomen, I discovered a tumor occupying the epigastric and left hypochondriac regions, extending about three inches below the margin of the ribs. To my touch, it gave the idea of a firm, smooth, unyielding substance; its limits could, without difficulty, be traced, excepting its upper edge, which was covered by the ribs. Mr. Simpson thought, on firmer pressure, that it gave a crackling sensation to the fingers. Its situation somewhat reminded me of cases of enlarged spleen I have examined, instances of which, though not common, are by no means rare in this district. From the appearances of the stools, I was inclined to doubt whether it might not be connected with the liver: at the same time, I suggested the possibility of there being a collection of fæces impacted in the colon. Full enemas of warm water, and subsequently of castor-oil and turpentine in thin gruel, had been ordered, the effect of which, though efficiently administered, tended to prove that there could be no obstruction in the lower bowel.

Having recently had some experience in the extraordinary retentive powers of that most admirably contrived, but ever getting wrong apparatus, the lower gut, I strongly urged that the same plan should be persevered in, together with a brisk purge of calomel or jalap. After a full enema of castor oil with turpentine had been twice repeated, she passed a substance about eight inches in length, and an inch and a half in diameter, composed of thread and worsted closely matted together: the substance was softened, and evidently disturbed from its original form, by the means which had been used to dislodge it. On questioning the girl, she confessed that for three years or more she had been in the habit of swallowing pieces of thread of different lengths: indeed, her taste appeared to have been as varied as the nature of the commodity she consumed would admit, for she drew largely on a worsted shawl which she occasionally wore.

From this time she ceased to have a recurrence of pain the; stools became natural in colour, and her general health much improved. I had not an opportunity of again examining the abdomen until ten days after she had passed the thread, when I found the tumor apparently not lessened in size, occupying the same situation as before. I then recommended that enemas of tepid water should be administered daily, and retained as long as possible, and that she should take an ounce and a half of olive oil every morning. This plan was persevered in for three weeks, but as the girl suffered no inconvenience from the presence of the "lump" in her body, both she and her friends were glad to discontinue it.

I lost sight of her until the second week in this year, when I had an opportunity of again examining her: the only difference I could observe was that the tumor had sank lower in the abdomen; it could be grasped between the finger and thumb, and readily moved from side to side: it is a flattened body about five inches in diameter.

The absence of bile in the stools before the thread was passed, is, perhaps, not the least interesting phenomenon in this case: jaundice might possibly in a short time have ensued, had not a portion of the substance been removed. Cases of jaundice, I believe, are far from uncommon, arising solely from obstructed thoroughfare in the colon: indeed, I call to mind a case which recently occurred in the practice of a friend of mine: mercury in its various forms, purgatives, &c. &c. proved useless: the man remained yellow: he was ultimately relieved by a steady perseverance in full enemas of warm water.

MEDICAL GAZETTE.

Friday, February 23, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

MEDICAL BENEFIT SOCIETIES.

In our number of last week we called attention to the dinner of the Society for Relief of Widows and Orphans of Medical men in London and its Vicinity, then about to take place, and we quoted from the preface to the laws some facts

respecting the origin, progress, and working of the Society. It is quite impossible to doubt that an institution which in little more than fifty years has accumulated forty-one thousand pounds, and distributed thirty-two thousand, must have worked powerfully for good or for evil on that profession, and in that locality to which its operations are confined. The general impression arising from the facts quoted is highly in favour of this institution, and is doubtless substantially correct, but it cannot be concealed, and should not be denied, that this society is liable to certain objections common to all those institutions which have for their object the systematic relief of poverty. Whatever these objections are, and however ungracious it may be to raise doubts which may stay the hand of the benevolent, or weaken the resolutions of the provident, it is better to examine them calmly, than to deny their validity or to decry their propriety. The whole of the argument against this systematic provision is directed in support of these two assertions—viz. 1st, that it taxes the most diligent, careful, and efficient members of society, for the benefit of the idle, the improvident, and the worthless; 2dly, that it removes the principal stimulus to industry, economy, and prudence,—virtues which improve personal character, make success more general, and failure more feared and less frequent.

Much, very much, may be urged on this side. Whether it be doled out at a convent gate, to a crowd, who, warmed and cheered by the sun of Italy, require but the absence of starvation to secure enjoyment; or at a workhouse during an English winter; a subsistence that may be had for asking, is always fatal to industry and prudence. The more easily alms may be obtained, and the larger their amount, the larger will be the proportion of those who calculate on receiving them, and the greater deterioration in the quality of its members will society suffer in consequence.

The old poor law, it was said, held out a premium to dependence on parish relief under the contingencies of old age, widowhood, sickness, and want of employment. The three first were bad enough, but the last was intolerable, and it was doubtless the abuses of a parish provision against want of work, and the embarrassments those abuses created in the always complicated question of wages, which raised up a party at once powerful enough, active enough, and discontented enough, to heave up the burden and alter its form and pressure. How easily the country lies now, or how long it will lie, under the new poor law, is another affair. Already slop-work, or the making of clothes by paupers, shews, by the police reports, that part of the pressure has been shifted to a class of manufacturers, who, living only just above starvation point, cannot stand the reduction produced by competing with paupers.

But, some how or other, the verb *to give*, with all its inflections, derivatives, and compounds, has found a place among the parts of speech in every known language. Put the screw on as we will, apply the test of destitution till the flesh creeps at the products of the experiment, button up the breeches pocket never so tightly, there is a something which tells us that man is not only a paying animal, but a giving animal; and that although this natural appetite or propensity must not be indulged weakly and to excess, yet neither can it safely be altogether repressed. It must be subjected, then, like other natural appetites, to the control of reason and conscience. Those who do not give systematically are apt to give injudiciously, and this even when the total amount of their

givings is incredibly small. We are apt to confine the idea of indiscriminate benevolence to those persons whose name is seen to every subscription list, but a man who only once in a year gives a penny in the street, may yet bestow that penny most injudiciously, and do all the social damage of which the amount is capable.

Let us see if there be any thing in a systematic provision for the poor of our own calling, which may be placed before us in the light of a practical question, to which every man is bound to give his best attention, and, after weighing the evidence, and considering the probabilities where direct evidence cannot be produced, to make up his mind decidedly, and to act consistently.

We believe that a diligent and accurate search would establish the fact, that all trades, crafts, or other forms of skill and industry whatever, which obtained powers of exclusion and restriction, whether as to the numbers admitted, the qualification of its members, the privilege of practising in a particular locality, or any form or amount of corporate privilege whatsoever, did also recognize the duty or the propriety of making provision for the aged or destitute among those once admitted within their boundaries. The recognition of this principle will be found more or less complete in different cases, greatly varying in the form or the degree, the time or the mode, in which it has been acted upon; sometimes, with forethought and intention, interwoven into the original plan and constitution of a body; sometimes arising out of unforeseen contingencies; sometimes made necessary by partial distress within the body corporate; sometimes forcibly imposed by a superior power or pressure from without. The member of a corporate body became, by birth, adoption, service, purchase, or otherwise, member of a large and powerful family. These family compacts or associations were but partial substitutes for those still older family compacts, the feudal dependencies, which bound lord and vassal together for mutual support and protection. The early Christian church—the primitive brotherhood—is the earliest great family compact to which we need trace all these, though the strong analogies of jewish polity and patriarchal life cannot be wholly overlooked. The forms of feudalism long outlived the substance. Followers and nominal dependents of men of quality, when at length turned adrift, became the "masterless men" who infested England under Elizabeth. Bardolph, Pistol, and Nym, are capital specimens of this class; their characters, and the development of their history, though the scene is laid during the battle of Agincourt, were no doubt drawn from the life, and abundantly explain why the whipping of "vagabonds and masterless men" after the second conviction, and hanging after the third, seemed a wholesome measure of state policy, and, coupled with the compulsory provision for the aged sick and needy, by the 43d of Elizabeth, in lieu of the religious establishments lately abolished, not an over harsh cure for a dangerous nuisance.

Corporate bodies have, of late years, received some severe shocks. Their privileges of exclusion, as well as those of internal police and government, have been materially diminished, partly by the pressure of opinion from without, partly by apathy within. In many trades the tests of competence hardly exist, or are hardly ever applied, each man is free to follow any calling he thinks fit, when, where, and how he pleases, with small and partial exceptions for particular trades and certain localities. Even in those callings, where public safety most requires

proof of education and competence, such as our own of medicine, how little coercive power is practically retained by the corporate bodies. They confer, indeed, the stamp of legality and sufficiency upon voluntary candidates; but they have, one by one, almost wholly relinquished the privileges of extrusion for misconduct, and of punishment for practising without their license. The tests of competence, indeed, they have each gradually raised; but the tide of education has risen too, and soon overpassing the barriers successively opposed to it, has inundated each department of our art with a deluge of the qualified and the unemployed. The Apothecaries' Company, indeed, is not water-tight; for the druggists, who could not rise above their barriers, have leaked in from below, and now threaten to swamp them.

Masterless men, then, there are in our profession, sick, and aged and poor there are too, and the widow and orphan, of course. Are we to do nothing for any such? Take the last class only. Shall we wait till the widow of our neighbour forces her way into our houses, wrings alms from us by a tale of misery and want, and leaves us a degraded mendicant? Surely not. Shall we establish a fund by a contribution from each on entering the profession, which shall either be claimed by all as an insurance, or reserved for division among the destitute? The insurance, to be effectual, would be expensive; the other plan might be well, but would be open to all the objections of a compulsory tax on the industrious and prudent,—who are generally, also, the successful,—for the benefit of the idle and improvident, who generally fail. A third and middle way occurs, viz. to *help those who help themselves*, by contributing to a voluntary fund, which is divided among the needy families of deceased members. In this way none can be benefited but the needy, and none encouraged but the provident. The rich will not receive what they do not want, and the poor need not blush to receive what they do. Such a fund the Society we have quoted possesses.

It is said by some that a society of this kind tempts to too early marriage, and the neglect of insurance; that a man, who ought to make competent provision for his family at his death, is apt to content himself with a miserable pittance only just above pauperism. This cannot be wholly denied, nor early and improvident marriages defended: but would not such a man leave his family *in* pauperism, instead of *above* it? and is not society the gainer by his increase of prudence, slight as it is? But besides, many men, at the time of beginning practice, cannot afford to effect an adequate insurance! To such men a small insurance against absolute want is no bad beginning till their means are greater. We know that a most eminent surgeon, whose opinion deserves the very highest respect, entertains this objection. We know, also, however, that he is an enrolled member, and a liberal contributor to its funds. Of such objectors the more the better*.

If this Society had the support of every qualified member of the profession within the limits it embraces—if the funds were administered with the prudence and justice that seem to have marked its course—if the test of the ballot in the admission of members were applied with kindness, yet with due care to *maintain professional character*, the profession would gain incalculably—we might almost say, would

* The example of this gentleman is the more valuable, too, as it proves that though he thinks this mode of doing good not the best that might be devised, he believes it to be the best that exists. His practical benevolence, too, is not likely to be tinged with the enthusiasm of more zealous partizans, which, though useful in rousing the indolent and the apathetic, is suspicious to the cautious and prudent.

be secure from some of the most serious evils and anxieties that now beset the conscientious discharge of their laborious duties.

WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual dinner of the Society for Relief of the Widows and Orphans of Medical Men in London and its vicinity, took place on Tuesday last, at the Freemasons' Tavern, and was rather less numerously attended than usual. His R.H. the Duke of Cambridge, the Patron, declined to preside this year, and the President, Sir Henry Halford, was prevented by illness. The chair was therefore taken by Sir Charles Mansfield Clarke, Bart., senior Vice-President.

The object of this institution is to afford relief to those widows and young children of deceased members who may be left in distressed circumstances. It was founded in 1788, by a few eminent physicians, viz. Dr. Denman, father of the present Lord Denman, Dr. Dennison, Dr. Douglas, Dr. Sims, and Dr. Squire; assisted by Mr. Randall, and by Mr. Chamberlain as Secretary. Though consisting of less than 350 members, yet, by judicious adherence to wise principles, it has afforded, since 1793, permanent yearly relief to 77 widows and 124 children, and accumulated a capital of £41,000. 31 widows and 24 children were relieved last year; the sum granted to a widow being from £30 to £35, with a few pounds for each child. The chairman expressed his regret that the grants were so small, but that could not be helped while the number of members was so limited, and the support of the wealthy, both in and out of the profession, so shamefully withheld or so sparingly given: more good could not be done without more means: but he congratulated the Society on being united together to secure even such a pittance to the families of the honest, scientific, and qualified regular practitioner, especially at a time when those, who really ought to know better, support and encourage the most fraudulent quackery. He had no doubt, however, that the public would, in time, find out their mistake, and recognise the medical practitioner as the best friend and adviser in the long run. The Rev. Samuel Wix, Vicar of St. Bartholomew's Hospital; Mr. Tudor, of the Stock Exchange; and several medical visitors, were present. Donations were received from the Ladies Elizabeth and Louisa Cornwallis, Mrs. Thwaites, Rev. S. Wix, Dr. Outram, Mr. Phipps, and Mr. Tudor; also from Messrs. Blagden, Chilver, Pennington, Propert, Stone, Squibb, Walne, Ware, and other members present.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, February 13, 1844.

BRANSBY B. COOPER, ESQ. F.R.S., VICE-PRESIDENT, IN THE CHAIR.

Case of extensive Carcinoma of the Lungs; with some Practical Remarks. By GEO. BURROWS, M.D., Physician to St. Bartholomew's Hospital.

HE author adverts to two conditions in which carcinoma is found in the lungs, either as a primary or secondary affection. In the latter it gives rise to few pulmonary symptoms, and produces but little change in the pulmonary tissues. Primary cancer of the lungs, on the other hand, is a most serious disease. Very large portions of a lung become infiltrated with the morbid deposit; and this is often combined with mediastinal tumors of a similar character. The symptoms which attend on these formations are most distressing and perplexing: they partly arise from the gradual consolidation of the lung, and partly from pressure on the respiratory tubes and blood-vessels at the root of the lung.

CASE.—A married woman, aged 20, was admitted into St. Bartholomew's Hospital, on 22d April, 1843, giving the following history of her complaints. She had been healthy until six months ago, when she was attacked with pain beneath the sternum, cough, and expectoration. She was delivered of her first child about three months since, after which dyspnœa and cough increased, with some swelling of the cervical glands. From this period her health declined, and a month before admission she was attacked with hæmoptysis. On admission, her face was pallid and bloated, with rather livid lips; respirations 40, with much dilatation of the nostrils; pulse 132, small; decubitus on the back, inclining to the right side. She complained of pain beneath the sternum; distressing paroxysms of cough, leaving her breathless and panting; expectoration scanty; the sputa bloody, resembling red currant juice; the cervical glands on the right side swollen, hard, and tender,

with enlarged veins passing over them; the external jugular vein much distended.

Upon auscultation and percussion the left lung appeared to be healthy. On the right side there was a feeble respiratory murmur in the upper third; in the lower two-thirds there was a varying amount of bronchial breathing; the expiration prolonged, accompanied with a modification of sibilus resembling a chirp. On percussion the sound was extremely dull all over the lower two-thirds of the right lung. The voice was so weak and husky, that no vocal phenomena could be discovered. The heart's sounds were natural, and not transmitted beyond the cardiac region.

The physical signs in some respects indicated consolidation of the larger part of the right lung, while in others they were those of pleuritic effusion. This latter supposition was supported by the measurement of the chest, which gave an excess of an inch and a half to the right over the left side, as well as the constant posture of the patient on her right side.

The author ventured to form the diagnosis of malignant disease of the right lung, partly founding that opinion on the physical signs, which did not correspond with any of the ordinary forms of thoracic disease, and partly on the history of the complaint. A few days after this examination, the cervical glands increased much in size, occasioning additional suffering by pressure on the trachea: the face, throat, right arm and mamma, became very anasarcous: the dyspnœa, cough, and peculiar bloody expectoration, continued: the posture was almost entirely on the right side, and the physical signs of pleuritic effusions more decided.

It now became a question whether paracentesis thoracis ought not to be performed to relieve her suffocative dyspnœa: the operation was not considered right, as the author still adhered to the opinion of extensive malignant formations in the right lung. Without further change in the symptoms, the woman expired at the end of a fortnight. The body was examined nine hours after death.

The heart and left lung were found healthy; the right pleura contained Oiv. of olive-brown coloured serum; the lung had not collapsed, but stood out projecting into the pleural cavity. The upper lobe was not much altered; the middle and lower lobes felt quite solid; a white lobulated tumor, something like a mass of suet, projected from the lower lobe. Towards the root of the lung was another dull white tumor, which had thrust the lung up from the spinal column. The substance of the middle lobe appeared to be continuous with these tumors. The pleura covering the lower lobe was dark coloured, with numerous enlarged blood-vessels ramifying on the surface. Upon making sections of the middle lobe and tumors, their substance was of a uniform dull white colour and rather soft; in some parts there were a few minute vessels; the surfaces yielded, on compression, a white creamy fluid in considerable quantity. The superficial parts of the lower lobe were converted into a dark brownish friable substance, studded with streaks and patches of white matter. Portions of the carcinomatous substance had also made their way into the right bronchus and right pulmonary vein.

In the upper part of the anterior mediastinum there was another carcinomatous tumor; and upon making sections of the enlarged cervical glands, they presented similar changes. All the abdominal and pelvic viscera were examined, and found free from carcinoma.

The author then proceeds to give an account of our knowledge of carcinoma in the lungs, referring to the works of Laennec, Andral, Stokes, Sims, and Walshe; and points out the rapidity with which the diagnosis of this disease has improved. The paper is concluded by the following statement:—"That when a patient has long been suffering from severe affection of the respiratory organs, with physical signs offering close analogies to those of consolidation of the lung, or of copious pleuritic effusion, and yet presenting anomalies not compatible with either of those morbid conditions; and when the history of the case does not accord with that of tubercular infiltration of the lung, nor of chronic pneumonia, nor pleurisy, malignant disease should be suspected. In addition, if the countenance become bloated, the eyeballs prominent, the throat swollen, with œdema of the arm on the affected side; enlargement of the superficial, cervical, and thoracic veins; dysphagia, with enlarged glands or other tumors on the surface of the body; and the cough be accompanied with currant-juice sputa, the diagnosis of malignant disease in the lung may be considered complete."

On the Effect of Water-Drinking in the cure of Gout. By John Bostock, M.D. F.R.S.

We have lately heard so much, not only of the moral, but of the physical effects of water-drinking, as practised either on the more moderate scale of the disciples of Father Mathew, or in the more profuse ingurgitations of the hydropathists, that I have conceived it may not be altogether uninteresting to the Medico-Chirurgical Society to hear the account of a few observations which I have had an opportunity of making upon the effect of these two processes. The first case to which I propose to direct the attention of

the Society is that of a gentleman, 70 years of age, who had been, from an early period of his life, subject to very frequent attacks of gout, the predisposition to which complaint is inherited from his parents. Connected with this, he has been a constant sufferer from stomach affections of various kinds; acidity, flatulence, heart-burn, irregularity of the bowels, and, in short, from every one of the affections which are enumerated in Cullen's well-known definition of dyspepsia. His mode of life was regular, and moderately active, and his diet what might be styled temperate, although not abstemious. He had, indeed, been advised by his medical friends to take wine in moderate quantity; he had occasionally employed ale, porter, and brandy and water, but never in what could be considered an excessive quantity. In this way he had passed about 40 years, seldom actually confined by indisposition, but almost always subject to a succession of ailments, which rendered it necessary to have recourse to medicines of various kinds, and, more especially, to alkalies, which were taken in large quantity, and, as the symptoms appeared to indicate, to purgatives or to sedatives, and to a variety of tonics and stimulants. During this period the renal secretion was seldom in what could be considered as a perfectly healthy state; it was sometimes loaded with deposits, and of high specific gravity; sometimes of low specific gravity, limpid, and aqueous; sometimes very copious, at other times scanty; while its chemical constitution was most variable both as to the nature and the proportion of its saline contents.

About four years ago, in consequence of the accession of certain alarming symptoms, of a new description, which were supposed to require the antiphlogistic treatment, the patient was ordered by his medical attendants to reduce his system of diet, and, more especially, to abstain entirely from fermented liquors, or distilled spirits of any description. By this restriction, and by other appropriate remedies, the threatened disease was averted. And besides this fortunate result, the patient found his general state of health and feelings so much improved by the change of diet, that the abstinence from all kinds of liquors has been strictly adhered to up to the present period. The effect has been, that he has lost all the dyspeptic symptoms, to which he had been subject for upwards of forty years, and, what I am more particularly desirous of pointing out to the Society, the renal secretion has been now, for a long period, in a perfectly natural state: it is nearly uniform in its specific gravity, and is totally free from all the morbid deposits which were before seldom absent from it. And there is a circumstance connected with it, which I conceive to be particularly deserving of attention, that although of an average specific gravity, and containing the proper proportion of urea and saline ingredients, it is uniformly increased in quantity, so that there has been now, for several months, considerably more of these substances discharged from the system than was formerly the case. It would appear, therefore, that the abstraction of the alcohol has produced a more healthy state of the digestive and secreting organs, so that the functions of the kidney are more actively and effectively performed. As a counterbalance to this improved state of the constitution, the only inconvenience experienced by the patient is the frequent and urgent calls to empty the bladder; these occur during the day at short intervals, and the night is seldom passed without at least two evacuations. To prevent this inconvenience, he has, for some time, diminished considerably the quantity of water, as well as of liquids of all kinds employed in diet; but it does not, at present, appear that this diminution has had much effect upon the amount or the quantity of the fluid discharged.

At the same time that I was making these observations upon the effect of what has been technically styled the Temperance system, an opportunity occurred to me of learning the result of a complete process of hydropathy. A gentleman, of nearly the same age with the former, who, like him, inherited a gouty diathesis, and had, for many years, suffered severely from the complaint, was induced to try the effects of the new practice, and according to the account which I received from himself, underwent the whole discipline in the most complete style. The quantity of fluid which was swallowed, could I have doubted the veracity of my informant, I should have conceived it impossible to have been received into the stomach, and to this were added the rubbings, sweatings, and the other adjuncts; among which, it must be observed, were a regulated diet, bodily exercise, fresh air, and the absence of many of those causes of disease which are the necessary attendants upon the life of a man who is either devoted to business, or who moves in the higher circles of society. The result, however, was, that the patient returned from his campaign, having subdued his old enemy, the gout, and in a better state of health than he had experienced for many years. He still continues to imbibe water in large quantity, and it is not therefore surprising that a large quantity of fluid should be voided. Indeed, while undergoing the complete process of hydropathization, the animal body may be regarded as a simple conduit, much resembling the well known little figure that adorns the corner of one of the streets in Brussels.

It appeared to me, as far as I was able to form an opinion, that, in this case, as in the former, the specific formation of the kidney was considerably increased; but I had not the means of ascertaining the fact by an absolute emperiment, as in the other instance.

Viewing the result of these two cases, and more especially comparing them with each other, we are induced to inquire, what practical inferences can be deduced from them. Now, taking into account all the circumstances, I conceive there can be no doubt that a decided benefit was obtained in each case, that a disease was removed of many years' standing, and which had resisted various means that had been previously employed. We may then inquire, to what particular circumstances are the beneficial results to be more immediately referred; to the abstraction of alcohol, to the imbibition of water, or to any other remedial agents. In the first case the abstraction of alcohol would appear to be the only circumstance that can be conceived to have produced the effect. The water taken was in moderate quantity, and although other means were employed, which might have a tendency to improve the general health, they were not such as can be conceived sufficiently powerful to produce so great a change in the state of the constitution. In the second case I should conceive, that although much of the benefit obtained may be ascribed to the abstraction of the alcohol, yet we can scarcely imagine that the prodigious influx of water into the stomach can have been without its influence on the system. Mechanical and unscientific as the idea may appear, I confess I am disposed to attribute a considerable effect to the complete removal of all the offensive matter which had polluted the vessels, thus thoroughly rinsing them out, and leaving them in a clear state to receive a supply of more healthy fluids. Nor are we to regard the adjuncts as, some of them at least, without their influence: although I must think that many of them were carried to an empirical, and I will say, a ludicrous extent. The annals of medicine from the earliest periods contain accounts of the temples of health, which were under the direction of the Asclepiadæ; the sacred fountains of Greece and Italy, to which Hippocrates and Celsus sent their patients; the miraculous springs, dedicated to various Saints, male and female, in the middle ages; and the acknowledged cures performed in modern times by waters, of which the chief peculiarity consists in their purity; all which may be placed in the same category, and which may serve to explain a part at least of the benefit derived from hydropathy.

The anniversary meeting will be held on Friday, the 1st of March, at 3 o'clock P.M.

CHANGES IN THE CLIMATE OF FRANCE.

From a paper read by M. Fuster, at the Academy of Sciences.

In the time of Julius Cæsar, the climate of Gaul was very harsh; the winter was very cold, came on early, and lasted long; for it began in October, and continued till April. Every navigable river, the Rhone included, was frozen over; and the ice was so strong as to bear armies and their baggage in safety.

Gaul was then inundated with rain; and the storms were so violent that they reached the natives even amid the thick covering of their forests. Neither the vine nor the fig could be cultivated, and the country was overspread with immense forests, covering, according to M. Fuster, forty-six millions of hectares of land.

The climate rapidly improved, as is shown by the ascending progress of the cultivation of the vine in the first century.

Before Strabo, it stopped at the foot of the Cevennes; it then began to pass this barrier. Columella, at a later period, met with it among the Allobroges (Dauphiny); and Pliny saw the vine growing spontaneously in the Vivarais, propagating itself in the district of Vienne, then reach Auvergne, and get as far as the Sequani or Franche-Comté. Indeed, in the 69th year of our era, when Domitian ordered the vines to be rooted up, they had been cultivated beyond the environs of Autun and the territory of the Bituriges (Berry.) The climate of France continued to improve; and when the Emperor Probus allowed the Gauls to plant the vine again, its culture, which had before stopped at the 47th degree of latitude, now extended to the north, along the banks of the Seine. The fig-tree, more sensitive to cold, which at the commencement of the Christian era had stopped on this side of the Cevennes, rapidly followed the vine in its progress. Julian, who in the middle of the fourth century was in the little town of Lutetiæ, gives a charming picture of the district. He extols the extreme mildness of its temperature, the excellence of its vines, and the rapid multiplication of its fig-trees. He also tells us in one of his letters, that in the north of Gaul the corn was ripe at the summer solstice.

That the south had improved as well as the north, Ausonius of Bordeaux, and Sidonius Apollinaris, do not permit us to doubt. The forests were diminishing as agriculture and civilization made progress.

In the fifth century, when the Franks became masters of Gaul, its climate was even milder than in the time of Julian; it was cha-

racterized by rain, followed by inundations, and intense heat, early and prolonged. Hence there were two flowering and two fruit seasons almost every year; and the vine reached the most northern points of the kingdom. It covered Normandy, Brittany, and Picardy; all these vines afforded fine crops, and many furnished very good wine. The vintage generally occurred in September, and sometimes even in August. In these northern provinces the harvest was reaped in the latter half of July, as appears from charters, contracts of sale, &c.

The ninth century marks the limits of the progress of the climate of France. It lost nothing, however, before the twelfth century, and seemed to remain stationary for two hundred years. Its winters were still made up of rain and tempest; the vine still covered the whole of the north. The harvest was still reaped in the north at the end of July, and the vintage was at the end of September.

The north-east of France afforded vines and vintages as late as the thirteenth century. After this period a change gradually took place for the worse. At last, in the seventeenth and eighteenth centuries, Picardy lost the remainder of its vineyards, as well as Normandy and Brittany. The wines of the environs of Paris fell into discredit; in the south, the orange, the lemon, and the citron tree, could no longer stand the climate of Languedoc in the open ground; the sugar cane in Provence now required the shelter of the greenhouse; lastly, the olive, which had been ascending, retrograded towards the sea.

In the seventeenth century Provence produced palm trees, of which the fruit, according to the report of Davity the cosmographer, was equal to the dates of Africa; and he adds, that the whole plain of this district, between Orgon, Aix, and Marseilles, by St. Chamaz, Miramas, Senas, and Malemort, was rich in orange, lemon, and palm trees, as well as the country between Marseilles, Hyeres, Frejus, &c. At the same period, Perpignan, in Roussillon, possessed two long rows of centenary orange trees, planted in the open air in a broad street.

The eighteenth century deprived our climate of all these advantages. It witnessed the last vintages of Normandy and Brittany; it impoverished the vineyards of Maine, and reduced the wines of Anjou, Orleans, and Sens, to mediocrity; it drove the olive tree below Carcassonne, and limited its cultivation on the eastern side; it deprived the palms of Provence of their fruit, drove the orange trees of Roussillon into greenhouses or sheltered places, and confined those of Provence beyond Toulouse, to the territory of Hyeres, Vence, Connate, and Nice.

When Arthur Young made his celebrated tour in France in 1787 and 1789, he mentioned a characteristic feature of the districts where the vine no longer prospered, namely, the great quantity of fruit which they bore, particularly plums, peaches, cherries, grapes, and melons; and he makes the limits for the cultivation of the olive extend from Carcassonne to Montelimart. All this is no longer the case. Grapes no longer ripen without difficulty in the open air in Brittany, Normandy, and Picardy; fruit-trees (especially those bearing stone-fruit), which in his time were so productixe in those provinces, now succeed only as espaliers. The olive tree has shrunk back on every side; it does not grow at Carcassonne; its recession in Provence is a fact generally acknowledged; it is no longer cultivated on the left bank of the Rhone, beyond Douzere, four or five leagues to the south of Montelimart. M. A. de Candolle, in 1835, fixed the extent of its retrogression since 1789, in the department of the Aude, at five myriametres (about 25 miles.) Moreover, according to Malte-Brun, wheat affords nearly a quarter less nutritious matter now than in 1788.—Abridged from the *Gazette Médicale*, Jan. 20, 1844.

MURIATE OF AMMONIA INTERNALLY.

In the medical treatment of pleurisy, and subacute inflammation of the lungs, and congestions of the mucous membrane, I have availed myself very satisfactorily of a German remedy, which is almost universally employed in such cases, viz. the muriate of ammonia.

In English practice it has generally been confined to external use, whereas it is employed by the Germans in a great variety of internal complaints. It usurps the place of the nitrate of potash in British practice. Its employment is confined to sub-acute affections; congestive states of the mucous membrane of the bronchia, and chronic affections of the serous membrane: where the inflammation runs very high, the nitrate of potash and soda are preferred. It has no very decided action on the system, although it sometimes stimulates the kidneys; but it is considered to be deobstruent, and to unload the vessels gradually, so that convalescence is achieved without any critical evacuation. It relieves thirst, and the tongue gets unloaded under its use. It has certainly a decided action on the mucous membrane generally, and is useful in old coughs accompanied by gastric derangement.

I was loath to employ it when I first commenced practice in St. Petersburg, but the good recommendation of my German

colleagues overcame my scruples, and during the last ten years of my sojourn among them, I prescribed it most freely, and have reason to speak most highly of it. I never failed to use it in the many cases which that climate affords of such affections as are benefited by it.

Its combination with the tartrate of antimony, in a solution of extract of liquorice, is a valuable prescription. The following is the form usually employed:—

℞ Ammoniæ Mur. ʒj.; Ext. Glycyrrhiz. ʒiij.; Antim. Tartar. gr. ij.; Aquæ destil. ʒviij. M.

A large table-spoonful of this mixture is administered every two hours. The antimony forms no inconsiderable part in the operation. When its nauseating effects have made sufficient impression upon the disease, it may be withdrawn, and the muriate continued by itself. In many cases the latter is only administered.

Stomach coughs are greatly benefited by it. Where the tongue is loaded, it cleans rapidly under its use. A variety of affections of the mucous membrane, sore throats, enlarged tonsils, relaxation of the uvula, &c. feel its influence.—*Sir G. Lefevre on Thermal Comfort.*

ON THE STATE OF THE HEART IN THE OLD.

Collected from Cases at the Salpêtrière,

By M. Neucourt.

If there is a great variety of opinions on the state and size of the heart in the adult, it is the same with that of the old; and the numerous measurements of MM. Bizot, Bouillaud, and Clendinning, are far from having ascertained anything certain as to the normal size of the heart, even in the adult. No inquiry of the kind had been made concerning the heart of the aged before M. Neucourt's researches; but he does not attempt to conceal that they are insufficient, from the small number of cases which he has examined, and—we would add—from the immense variety of the productions of nature, which makes it difficult to fix her limits. M. Neucourt's cases were all women, and at least 60 years of age. We will not copy all the figures which the author has given, representing his varied measurements of the heart; but we will confine ourselves to quoting the thickness of the parietes of the left ventricle in hearts which were not hypertrophied. It was as follows:—

Maximum	. .	26 millimetres.
Mean	. . .	16 ,,
Minimum	. .	8 ,,

"These figures," says the author, with great propriety, "show how distant are the numbers between which the normal thickness of this ventricle varies in the aged, and how vague are the assertions of authors, who often say that the heart is hypertrophied, or that its parietes are attenuated, without entering into particulars. In limiting ourselves to these figures, we only give the greatest thickness of the wall of the left ventricle, and we are thus far from having an exact notion of it. In fact, it grows thinner and thinner, from the base to the apex, where it is sometimes not more than two or three millimetres thick, or even disappears completely, and is replaced by fatty tissues, so that a few columnæ carneæ interlaced with fat are the only obturators of the heart at this point. The possibility of such a state ought to be taken into consideration, and seems calculated to overturn some physiological theories concerning the action of the heart."

The following are the practical conclusions which may be collected from the author's paper:—

1. The heart in the aged is at least as large as in the adult, and, if there is a difference, it is on the side of the former.

2. The thickness of the parietes is rather greater in old age than at any other time of life.

3. All the orifices are rather larger than in the adult.

4. Ossifications of the aorta do not of themselves necessarily produce derangement in the functions of the heart.

5. No sign shows their presence, when they are unaccompanied either by contraction or by insufficiency of the orifices where they occur.

6. Ossifications of the abdominal aorta are more frequent than in any other part of the artery.

7. It is almost certain that diseases of the heart, whether contraction or weakness (*insuffisance*), are discoverable in the old by the same auscultatory signs as in the adult.

8. After death, the cavities of the heart contract the more closely, in proportion to the rapidity with which death took place.

9. There may be irregular sounds at the orifices of the heart without disturbance of its functions.

10. Diseases of the heart, with very serious impairment of its functions, may exist for a great number of years without causing death.—*Gazette Médicale*, abridged from the *Archives Générales.*

PROBABLE DURATION OF LIFE.

The probable duration of life—the *Vie probable* of the French—is seen at once

by inspecting the table; it is the time in which the number born is reduced one-half; in the English table, 45½ years. It is probable, or, in Halley's words, "an even wager," that a child will live 45½ years; for the 100,000 are reduced to 50,301—nearly half their number—by the age 45; there is therefore nearly an equal number of chances (50,000) in favour of living to and of dying before the age 45½. The *probable* life of a boy is 44, of a girl 47 years. How long is it probable that a woman aged 25 will live? The "living" against 25 in the table is 31,337, the half of which is 15,668, a number attained at the age 66; 41 years therefore is the *probable* duration of her life. What is the "probable life" of a man at the age of 60? The number against the age is 18,808; and the half of 18,808 is 9,404, to which the 18,801 are reduced at the age 73; at 60 therefore it is *probable* that a man will live 13 years.

Suppose that it were desired to ascertain the influence of factory labour, or any other employment—of residence in a school or city; the first point to be determined would be the average probability of life according to the English Life table; say that the children enter at 10 years of age, then as in the Table, 70,612 is against the age and 68,627 against the age 15, the average probability of living five years is $\frac{68627}{70612}$, and the degree in which this probability is diminished or increased measures exactly the influence of the circumstances in which the children are placed.

Upon adding up the column of "living" the sum of the numbers will be found to amount to 4,165,890; subtract half 100,000 from this, and 4,115,890, the number of the years which the 100,000 persons live, will be obtained. Divide the years of life, 4,115,890, by 100,000, and the quotient, 41·16, will be the mean age. This is called the *Expectation of Life—Vie Moyenne* of Deparcieux; for males it is 40 years, females 42 years, and for both sexes 41 years. By repeating the process the expectation of life at each year of age is obtained; at five years it is 50 years; at ten 47; at twenty 40; at thirty 34; at forty 27; at fifty 21; at sixty 14, &c. &c. The average age at which persons aged 30 will die is 64 years, and 74 is the average age at which sexagenarians will die. —*From the Registrar-General's Report.*

STRYCHNINE IN INFLUENZA.

The prevailing epidemic influenza made its first appearance during the present season, in Gettysburg, Pa., about the 1st of July. The disease was characterised by the usual symptoms. About two-thirds of the whole number of inhabitants became subjects of the disease, not one half of whom, however, deemed the malady of sufficient severity to require medical advice. A few of the cases to which our attention was called, were complicated with bronchitis, arachnitis, rheumatism, &c. In two cases severe nervous earache was the leading symptom; in one case, periodical neuralgia of the supra-orbital nerve came on every morning at 8 o'clock. Observation soon convinced us that this disease, in the commencement, had its seat in the nervous system, which was in a depressed state, not yielding its normal quota of nervous influence; and that after this, the mucous tissue was the next to suffer. Having succeeded with strychnine in many of those diseases denominated neuroses, in which there was no inflammation or congestion of the nervous centre, we supposed that in this affection its use might be followed with results equally favourable; and we therefore resolved to use the remedy upon ourselves, provided there was an opportunity. With this we were *favoured* about two weeks ago, when, whilst under the influence of mere nervous sedation and irritability, with a commencing derangement of the mucous tissue of the head, we took a full dose of the medicine; and we were happy to find ourselves relieved in a few hours of every sympton. We were soon after called upon by a young gentleman, who was attacked with the prodromic symptoms, to whom we gave a portion, which also cut short the disease. Our next case was that of a female, æt. 50, subject to occasional paroxysms of hysteria. We found her in the chill with violent pains in the head, back, and extremities, accompanied by hoarseness and cough. Gave comp. ext. colocynth grs. x., and blue mass, grs. v., as a laxative, to be aided by sulph. magnesiæ, if necessary. After the intestinal canal was evacuated, we exhibited the strychnine; and in twelve hours the patient was free from the disease. We have since exhibited this potent nervine in a number of cases with equally good effects, always first subduing any local inflammation which might be present.—*Dr. Gilbert, in New York Journ.*

HERCULEAN TREATMENT OF DYSENTERY.

We make the following extract from a private communication, dated October 3d, from Dr. P. Fahnestock, of Pittsburgh, Pa.

There has recently prevailed in this vicinity, about two miles from the city, an endemic dysentery, characterized by considerable febrile action, with frequent mucous or bloody evacuations, and violent tormina and tenesmus. It attacked both sexes and all ages indiscriminately, and among them I attended from sixty to eighty cases. As my treatment was peculiar, and as its success confirmed its propriety (but three

cases having proved fatal), I will state how I managed them.

In the case of an adult patient of either sex, having ten or twelve stools per hour, consisting of blood and mucus alone, accompanied with great tormina and tenesmus, I usually gave from six to fifteen grains of pulverised opium, with from xx. to xxx. grs. of calomel; but if the pulse was full and frequent, this treatment was premised by general blood-letting and the application of leeches to the anus. In six or eight hours after the administration of the medicine, I prescribed the following:

℞ Ol. Ricini, ℥jss.; Spir. Terebin. ℥ss.

These were my maximum doses; and after the operation of the oils, I gave calomel and Dover's powder in small doses, with gum-water as a drink, and rice and arrow-root as diet. It was seldom found necessary to repeat the calomel and opium. To children, six or eight years old, I gave as much as four or five grains of opium, without producing more than a few hours' sleep.—*New York Journal of Medicine.*

HYDROPATHY IN FRANCE.

Upon an application being made to the French Government for permission to open an hydropathic establishment in Paris, the government referred the subject to the French Academy for their opinion. The following are the conclusions to which the Academy arrived, after mature consideration:—"1, That hydropathy is a dangerous therapeutical method, which does not rest on facts; 2, That its theory is chimerical; 3, That it is in disaccord with our chemical and pathological doctrines; 4, That the Academy cannot in any way approve of it; 5, That the use of cold water has been long in the domain of medicine, and submitted to rules."—*Times.*

BOOKS RECEIVED FOR REVIEW.

An Inquiry into the Nature of the Simple Bodies of Chemistry. By D. Low, F.R.S.E.

A Complete Condensed Practical Treatise on Ophthalmic Medicine. By Edward Octavius Hocken, M.D.

General Report of the Royal Hospitals of Bridewell and Bethlem, and of the House of Occupations, for the year ending 31st December, 1843.

Observations on the Proximate Cause of Insanity. By James Sheppard, M.R.C.S.

ACNE INDURATA.

To the Editor of the Medical Gazette.

Sir,

In reply to a "Constant Reader," in your last number, I think he will find Creosote, administered in doses of one minim three times a day, for some length of time, the best remedy in acne indurata. Combined with this I am in the habit of ordering a lotion of nitric acid locally (℥ss.—Oj.), and enjoining a good nutritious diet, with fresh air and exercise. My success with this plan has been considerable in those generally very obstinate affections, and I strongly advise your correspondent giving it a fair trial.

Your obedient servant,

Observator.

Feb. 20, 1844.

P.S.—This remedy was first used for this disease, we believe, by Dr. Elliotson.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, February 15, 1844.

John Nourse Morse, Gloucester. — Richard Allen, Preston, Lancashire.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, February 10, 1844.

Dropsy, Cancer, and other Diseases of Uncertain Seat	97
Diseases of the Brain, Nerves, and Senses	165
Diseases of the Lungs and other Organs of Respiration	415
Diseases of the Heart and Blood-vessels	34
Diseases of the Stomach, Liver, and other Organs of Digestion	57
Diseases of the Kidneys, &c.	6
Childbed	4
Paramenia	0
Ovarian Dropsy	1
Disease of Uterus, &c.	0
Arthritis	0
Rheumatism	0
Diseases of Joints, &c.	3
Carbuncle	0
Phlegmon	0
Ulcer	0
Fistula	1
Diseases of Skin, &c.	0
Old Age or Natural Decay	85
Deaths by Violence, Privation, or Intemperance	20
Small Pox	17
Measles	30
Scarlatina	37
Hooping Cough	44
Croup	8
Thrush	2
Diarrhœa	6
Dysentery	1
Cholera	0
Influenza	5
Ague	1
Remittent Fever	0
Typhus	30
Erysipelas	3
Syphilis	1
Hydrophobia	1
Causes not specified	2
Deaths from all Causes	1076

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, MARCH 1, 1844.

ON DISEASES ARISING FROM THE DEFECTIVE EXPANSION OF THE LUNGS IN EARLY YOUTH;

Being the Gulstonian Lectures at the Royal College of Physicians, delivered

By George Hilaro Barlow, M.D.
Fellow of the College, and one of the Physicians of Guy's Hospital.

It is, I believe, admitted upon all hands, that the period of early youth is one of the most important epochs in human existence, not only as regards the formation of the character and disposition of the mind, but also the establishment of the health of the body; and also—that a proportionate development of the different organs of the latter is essential to the maintenance of that health.

Yet, although the truth of these two propositions is thus generally acknowledged, still I cannot but suspect that the idea entertained of them is for the most part too indistinct, and that the relation which they bear to each other is too commonly lost sight of; and further, that we are too apt to content ourselves with vague expressions, and consequently with inaccurate notions, respecting the effects of the elaboration of the sexual organs upon the rest of the system, forgetting that they are not the only parts the more perfect development of which may be expected about the period of which we are speaking.

Now, although it cannot be reasonably doubted that there is no part the anormal development of which (whether excessive or deficient) can fail to produce some corresponding impression upon other organs, the estimation of which should never be omitted when we would calculate the probable pathological results of any such irregular development; yet there seem to occur, at this period, certain general changes in the proportions of different parts, which must call for compensating changes in the organs of circulation, assimulation, and depuration.

It would, I need hardly say, occupy a far longer time than that allotted for the delivery of these lectures (even if I were in other respects capable of the task), to follow out the subject of proportionate development to the fullest extent; for not only is the subject itself almost unlimited, and one which involves considerations, and suggests questions, in almost every department of physiology and pathology; but, also, is there but comparatively little aid to be obtained from the labours of those who have preceded me. I do not, indeed, mean by this to assert, that no account has been taken by other pathologists of lesions of nutrition, or that hypertrophies, or undue developments of various organs, have not been enumerated amongst these; on the contrary, I rather incline to the opinion, that an almost undue importance has been assigned to them, owing to their having been regarded as primary affections, and not, as I believe more frequently happens, the consequence of some antecedent derangement, generally a suspension of function of some other organ. I shall, therefore, in the course of these lectures, confine myself to the consideration of disease dependent upon a want of proportionate growth between the lungs, the liver, and the two sides of the heart.

Before proceeding further, I would beg to call attention to the circumstance, that the different excretory organs are in a great measure coadjutive and supplementary to each other, which is, I believe, more particularly the case with respect to the lungs and the liver. This is strikingly shewn by the fact, that in the different classes of vertebrate animals the liver increases in the same measure that the respiration diminishes; being at its maximum in fishes, at its minimum in mammalia, and having its mean amongst reptiles. Now the fœtus in utero

may be said in this respect nearly to resemble the fish; and, accordingly, we find that its liver is much larger than in extra-uterine life. As childhood advances, and the voluntary muscles are more exercised and more developed, while the portion of time spent in sleep becomes less, there is greater need of the respiratory function. Accordingly, we find a gradual increase in the proportionate development of the lungs, and corresponding diminution of the liver. It is, however, in the period of youth that the change in question seems to be carried out to the greatest extent; for during this period growth becoming less rapid, and consequently nutrition comparatively less active, so, owing to the fuller development of those parts whose blood is returned to the heart directly through the venæ cavæ, and the less activity and volume of those which pour their venous blood into the portal system, a proportional change now takes place in the functions and volume of the liver and the lungs, the latter being developed, if I may be allowed the expression, at the expense of the former.

[The lecturer here exhibited diagrams shewing the increase in the ratio of the chest to the abdomen from childhood to manhood, and shewed that although this ratio remained almost stationary between the ages of one and nine years, it nearly doubled between the latter age and manhood.]

When the lungs are sound, the capacity of the chest sufficiently ample, and the air passages of due calibre, this change is effected with safety, and that full expansion of the chest is effected, which, as we may learn from the statues of antiquity, has been at all times regarded as indicative of health and vigour. If, on the other hand, the chest be contracted, or the heart obstructed or embarrassed, or the larynx, trachea, or bronchi narrow or compressed, or the lungs unsound, we should anticipate that one or both of two evils must be the consequence—1st, either the change which should now take place is prevented, the lungs and the liver retaining their original proportion, the result being imperfect respiration, a tumid abdomen, and an ill-developed frame; 2d, or the lungs suffer from the increase of function which they are called upon to perform, which must more especially be the case if there exist in the system a predisposition to tuberculous disease;—or it may happen, though more rarely, that both these evils may concur.

In the first case, the mischief arises through the medium of the pulmonary circulation, which becomes obstructed, thereby giving rise to dilatation of the right side of the heart, with or without hypertrophy, though more commonly the former, the lungs themselves being, at the first, free from structural lesion. In the second there may be, primarily, no mechanical impediment to the pulmonary circulation, or to the inflation of the air cells; but the lungs become the seat of structural change, at the time that their functional activity should be the greatest. This structural change may no doubt give rise to obstruction on the right side of the heart, and consequent venous congestion throughout the body: still such obstruction and congestion will rarely become a very urgent and permanent symptom, unless the structural change in the lungs have taken place very rapidly.

I. I now proceed to call your attention to the first division of my subject, namely, pulmonary obstruction, with hypertrophy or dilatation of the right heart.

The cases in which this occurs may, I think, be divided into five classes:—

1. Those in which the obstruction to the circulation in the right side of the heart is produced simply by defective expansion of the lungs and air passages.

2. Those in which it is the result of morbid contraction of the thoracic walls, as pleuritis.

3. Those in which it is the result of pericarditis, acting *mediately* through the impediment opposed to the respiratory movements.

4. Those in which it results directly from the obstruction to the return of the blood to the left side of the heart, produced by contraction of the left auriculo-ventricular opening.

5. Those in which the origin of the mischief is of a more complicated character.

1. In speaking of those forms of disease in which the derangements in question appear to arise primarily in defective expansion of the lungs and air passages, it may be well to trace synthetically the series of derangements which might antecedently be expected to arise from such a cause, and then we shall be able with greater accuracy to investigate analytically the origin of the morbid changes observed in some of the cases of which I shall presently have occasion to speak.

Supposing, then, that about the period at which the more perfect development of the chest may be expected to ensue, the growth of that region of the body is from some cause arrested, what would be the immediate and necessary result?

I believe that in the young subject there would be diminished flow of blood from the right ventricle, with narrowness of the pulmonary artery. The first of these results, viz. the diminished flow of blood from the right side of the heart, appears to be so obvious, and must, I think, be so familiar to all who have had frequent opportunities of

inspecting the bodies of persons who have died of pulmonary obstruction, that it may seem superfluous to adduce any further proof of it. Still, as I have heard the objection urged, that impeded respiration, although it interferes with the aeration of the blood, does not necessarily oppose its passage from the right heart; since, in suspended respiration, blood, though black, continues for some time to be circulated; and further, that the movements of respiration cannot aid the pulmonary circulation, because, forsooth, they are not synchronous with the pulsations of the heart; it may be well to consider for a moment the forces which maintain the pulmonary circulation.

Now I think it will readily be admitted, that the first propelling power is the systole of the right ventricle. By means of this force the artery is filled, and the resistance opposed by its elasticity overcome. As soon, however, as the systole ceases, the valves being closed, the pressure exercised upon the blood in the pulmonary arteries, by the elasticity of these arteries, can act only in propelling it in a continuous current; so that we may regard the heart and large arteries as an apparatus for converting an alternating motion into a continuous one, much as a steam engine with a fly-wheel; or, to use the more appropriate comparison of Sir Charles Bell, the elasticity of the artery acts like the compressed air in a fire engine, to produce a continuous current from a force acting at intervals. In a word, the heart acting mediately through the elastic force of the pulmonary artery, is the propelling force of the pulmonic circulation.

But there are also attrahent forces aiding to maintain the same circulation; of these, I believe that one is mechanical, and the other vital. The first, or mechanical, is the diminution of the elastic force of the air in the lungs which must take place at each inspiration. There must be, it is true, a corresponding opposing or retarding force arising from the compression of the air at each act of expiration, but the effect of this force is counteracted by the closure of the sigmoid valves, so that the respiratory movements act upon the blood in the pulmonary vessels much in the same manner that the pressure of muscular contraction acts upon that in the systemic veins, *i. e.* only in one direction, regurgitation being prevented by the closure of the valves. Hence it follows, too, that whilst the alternate decrease and increase in the elastic force of the air, produced by the expansion and contraction of the lungs, acts as an attrahent force to aid the flow of blood from the right side of the heart, it also acts as a propelling force to return it to the left. I would here beg to remind you, that I am now speaking solely of the *pulmonic* circulation, and that these remarks, in so far as they relate to the action of respiration upon the circulation, will not apply to the blood in the systemic vessels, the cases being altogether dissimilar, for it is to be remembered that the heart and the origins of the large vessels are, by the dense membranous walls of the mediastinum, excluded, or nearly so, from the influence of the changes in the elasticity of the air, resulting from the respiratory movements of the chest, whilst the ramifications of the pulmonary arteries and veins are left fully exposed to that influence—a condition which does not exist in the systemic circulation.

The other or physiological attrahent force, will, perhaps, be best explained by considering what occurs in other parts.

Now, we observe that if the circulation in any organ be excited to increased activity, the artery supplying that part, or organ, undergoes a corresponding increase. Take, for instance, the case of a diabetic kidney, or of the testes of those animals whose sexual organs undergo a periodic excitement. In both these cases we find an enlargement of the artery, but this enlargement cannot be accounted for upon any simply mechanical principle; for we have an increase in the capacity of the capillaries, as well as an increased flow through the branches of the afferent duct, circumstances which, by facilitating the flow of blood from the artery, must produce a condition of that artery the very opposite to mechanical distension. Again, take the case of an artery supplying an inflamed part, and here we find a similar enlargement under precisely similar circumstances. There is, however, another instance, and one, perhaps, still more to my purpose, in which it is often said, though, I believe, incorrectly, that an artery enlarges from mere mechanical distension. I mean the case of an anastomosing branch, when a ligature has been placed upon the main trunk. Where this has been done, there must, it is true, be produced a slight increase in the distending force of the current from the left ventricle, arising from the blocking up of a large channel; but this effect is felt by all the arteries of the body in common with the anastomoses of that which has been tied, and cannot, therefore, be reasonably regarded in the light of a cause to an effect which is produced solely upon the latter. But this is not all; for one of the first consequences of placing a ligature upon an artery must be the emptying, or nearly so, of that part of the artery beyond the ligature, the effect of which must be to enable the anastomosing branches entering it at that part to empty themselves the more readily, and thereby to diminish the lateral or distending pressure of the blood contained in

them; so that we perceive that in this most notable instance of arteries enlarging to suit the wants of the part which they supply, this enlargement is not the result of mechanical distension, but, on the contrary, takes place, if I may be allowed the expression, in defiance of a diminution of that distension.

Take, again, the opposite case of a change in the condition of any organ diminishing the vascularity of that organ, as in the testes of the animals above alluded to, after the periodic excitement has subsided, or the uterus after parturition, and we find the arteries contracting, although exposed to an increased distending force; the same thing also happens on the cardial side of a ligature on an artery, between the ligature and the origin of the anastomoses.

This relation, then, between the vascularity of a part and the size of the artery which supplies it, by which the latter increases in a direct proportion with the former, appears to be a law of the arterial system: whether this law operates through the medium of the ganglionic system of nerves, or whether it is brought about by any change in the nutrition of the arterial tunics resulting from alteration in the quantity of blood in the arteries, it is hardly to my present purpose to inquire (though I incline to the former opinion), my object being to establish the truth of the law itself.

Now this law, as we have seen, applies to the glands in common with or even beyond other structures, so that when any such organ is called into greater activity by its natural stimulus being maintained in increased intensity (by which its vascularity is also increased), a corresponding enlargement takes place in the volume of the artery which supplies it—and the converse. Now I believe that physiologists are nearly all agreed in regarding the lung as a gland, of which the pulmonary artery and vein are the afferent and efferent vessels, and the trachea both an afferent and an efferent duct. And accordingly we should expect that under the influence of its natural stimulus, the air, the activity of the pulmonic circulation would be increased, and the calibre of the artery enlarged—and the converse. This agency of the air in increasing the flow of blood through the lungs, and increasing the calibre of the artery, I have classed amongst the efferent forces.

The forces, then, which maintain the pulmonic circulation, are the propelling force of the systole of the right ventricle, and elasticity of the pulmonary arteries; and the attrahent forces resulting from the diminished elasticity of the air during inspiration, and the physiological action of the air, the natural stimulus of the lung, producing a flow of blood to the organ, and developing its afferent vessel. To these may be added the propelling force through the veins of the increased elasticity of the air in the lungs during inspiration.

We perceive, then, from this view of the forces which maintain the pulmonic circulation, that activity of the respiratory function must have the effect not only of propelling the blood through the lungs, but also of developing the pulmonary artery, and consequently where this function is impeded, we should anticipate obstruction to the passage of blood through the lungs, or, in other words, from the right ventricle, and deficiency in the calibre of the pulmonary artery.

The consequence of the obstruction to the passage of the blood from the right ventricle will be dilatation of its cavity, accompanied (except in debilitated constitutions) by hypertrophy of its walls.

Another effect of a diminished flow of blood from the right ventricle must be an impediment to the entrance of the blood into that ventricle. And it matters little, as far as regards the effect upon those organs which return their blood to the right auricle, whether we assume the current through the right auriculo-ventricular opening to be diminished, or that the blood regurgitates at each ventricular systole; at the same time, I think it probable that the latter is the case, the safety-valve force of the tricuspid valve, pointed out by Mr. T. Wilkinson King, being called into play by the obstacle opposed to the emptying of the right ventricle at its pulmonic orifice. I say it matters little as regards these other organs, for I think the effect upon this part itself would be different in the two cases. If the current through the tricuspid valve were diminished, and no regurgitation took place, I should expect that that orifice would be smaller than in the healthy subject, and that there would be great dilatation of the auricle, whereas in the latter case, that of regurgitation, I should expect to find the auriculo-ventricular orifice would be of full, or perhaps preternatural size; both ventricle and auricle being hypertrophic as well as dilated. There would also, *cæteris paribus*, be more pulmonary apoplexy in the former case than in the latter. The immediate consequence, however, in either case, would be great distension of the auricle, which, being kept up by the pressure of the blood in the veins, dilatation and hypertrophy of that cavity likewise would ensue. This state of the right heart would give rise to distension of the great venous trunks, with accumulation of blood in those reservoirs, if I may so term them, the liver and the spleen; and the secondary consequence, congestion of the whole venous system, with lividity and anasarcous effusion. The same cause, also, must produce impeded passage of the blood through the venæ cavæ hepaticæ,

and consequently through the portal veins, and thereby cause engorgement of the liver and ascites.

Having now traced the consequences of defective expansion of the lungs through the right side of the heart to the extreme veins, we might, no doubt, continue our course back from the veins, through the arterial system, to the left side of the heart, and we should find that some effects would be produced throughout by the obstruction to the return of the venous blood, and these effects ought by no means to be lost sight of: as, however, there are results of greater importance produced in the opposite direction, we will first return to the lungs, and trace the sequences of diseased action through the left side of the heart into the arterial system.

First, then, it must be obvious that the transit of blood through the lungs being obstructed, there must be a diminution in the quantity of blood returned from the lungs to the left side of the heart; the effect of this will be a smallness of the auricle, and as I believe that not only the arteries, but also the orifices of the different cavities of the heart, adapt themselves to the quantity of blood transmitted through them, we should expect, at the same time, to find a narrowness of the left auriculo-ventricular opening.

In the same way we should infer that the capacity of the left ventricle would be small, its walls probably thin, and the aorta narrow: from the same cause, namely, the small quantity of blood passing through the left side of the heart, the calibre of the arteries would be small throughout the whole of the body likewise. Such, if I mistake not, would be the effect produced directly upon the left heart and arterial system, by defective expansion of the lungs.

But, as I have before stated, some effects must also be produced upon the left side of the heart by the venous obstruction already described, which must be brought about as follows: the obstruction opposed to the onward current of the blood in the veins, and the ultimately congested or even indurated condition of several parts through which the circulation has to be maintained by the left ventricle, must tend to embarrass that ventricle, and thereby induce in it dilatation, or dilatation with hypertrophy, so that there would be two opposite causes in operation: 1st, the diminished flow of blood into the left ventricle, which would have the effect of diminishing the cavity of the ventricle, and thinning its walls; and 2dly, the venous obstruction, which would have the contrary effect: so that accordingly as one or the other course might preponderate we should expect to find a corresponding state of the left side of the heart.

The morbid changes, then, which upon the principles already laid down, we should expect to find associated with defective development of the lungs and air passages, would be, in extreme cases, narrowness of the pulmonary artery, dilatation with hypertrophy of the right ventricle and auricle, with the same conditions, though in a far less degree, on the left side of the heart, and narrowness of the aorta; engorgement of the great venous trunks; enlargement of the liver and spleen, with nutmeg degeneration of the former, leading to contraction and induration in the more advanced cases; ascites; general venous congestion; and anarsarca.

These, I believe, are the morbid appearances that will most commonly be found, although there can be no doubt but that others will arise in the progress of so long a series of diseased actions as those which have been described; neither can it be doubted, that such lesions, however produced, must, when established, modify to a great extent the effects produced upon various parts by the primary derangement. These complications will, however, be best understood by a reference to the particular cases in which they were observed.

The following is a good though rather an extreme instance of the uncomplicated cases.

Case I.—In the summer of 1837, Mary Kendal, aged 12 years, became my patient at the Surrey Dispensary. She had been for some months previously under the care of Mr. Turner, of Bermondsey Square, who kindly informed me that she had been affected with dyspnœa and palpitation, with symptoms of enlargement of the heart, and there had been manifest peritoneal effusion. Her health was stated to have been good during childhood. She was of moderate height for a person of her age, and her limbs were well formed and straight, without any tendency to rachitic distortion. The chest, however, appeared small in comparison with the abdomen, as far as I could judge, in the distended state of the latter. There was extensive dulness on percussion over the region of the heart, where a hoarse systolic murmur was distinctly audible: the liver was to be felt distinctly about an inch below the margin of the ribs; and there was considerable effusion into the peritoneal cavity. The jugular veins pulsated considerably, and her countenance was slightly livid. The pulse small and frequent. Her urine was dark, and became turbid on cooling, but contained no albumen.

She was greatly relieved by local depletion, moderate purgatives, and diuretics, combined at first with mercury. At the end of a little more than two months she was free from all dropsical effusion, and was able to walk gently for more than a mile.

During the course of the three following years she had occasional returns of the symp-

toms already described, which yielded to purgatives and diuretics. In May, 1840, she again became my patient, her symptoms being the same as when I first saw her in 1827, with, however, greater severity. She was now 15 years old, and I remarked that she had grown scarcely at all during the preceding three years, which observation was confirmed by her parents. Her extremities, however, appeared small in comparison with the trunk. There was now dulness on percussion over a large space in the cardiac region, which extended considerably further to the right than we find to be the case in healthy subjects. A double bellows sound was distinctly audible, and loudest at nearly an inch to the right of the sternum. The resonance of the chest was slightly, though very slightly, less than natural, excepting at the space just mentioned, and the lower part of the right side: the respiratory sound was generally good, though not audible below the seventh rib on the right side, owing probably to the enlargement of the liver. The countenance was livid. There was considerable peritoneal effusion and œdema of the legs. The urine was scanty and high coloured, depositing a reddish brown sediment. Tongue furred, with red edges and prominent papillæ.

It would occupy far too much time to follow the progress of this case more minutely. Suffice it therefore to say, that relief was again obtained, chiefly, as it appeared to me, by means of diuretics; she, however, speedily relapsed. Obtained temporary relief from paracentesis abdominis, and died on the 28th of March, 1840, four years after she first became my patient, and nearly five from the commencement of the disease.

Upon examination of the body 24 hours after death, the following appearances were noticed.

The stature was short for the size of the subject, and the extremities small for the size of the trunk. The chest appeared narrow and ill developed. The mammæ and external genitals infantile. When the abdomen was opened, the liver was seen to be enormously enlarged, and its acute margin blunted. The omentum thickened and contracted. The peritoneum generally dark, and rather opaque; it contained about three quarts of pale straw-coloured turbid serum. The liver when cut into was very hard, and presented the character of the nutmeg degeneration in its most advanced stage. The right kidney was large and healthy, evidently a very active organ; the left was smaller, but otherwise resembled the right.

Upon raising the sternum and cartilages of the ribs, little was brought into view but the distended pericardium, which extended on the right side beyond the space thus exposed. The pericardium contained a small quantity of clear serum. The right auricle and ventricle were enormously distended; the latter formed the apex of the heart, and before it was opened was larger than a large man's fist. The left side of the heart was large, but appeared small in comparison with the right.

The right auricle was found to contain a large and rather loose coagulum; its cavity was very capacious and its walls much thickened. The auriculo-ventricular opening when viewed from the auricle appeared to be about an inch and a half in diameter. The cavity of the right ventricle immensely exceeded the natural size, and its walls were hypertrophied. The chordæ tendineæ were tense, so that it was impossible for the tricuspid valve to act perfectly; but setting this aside, its curtains were manifestly inadequate to close the orifice. The valve was structurally healthy. The orifice of the pulmonary artery was small, as was also the artery itself; its sigmoid valves were healthy. The left auricle and ventricle were dilated, but in a much less degree than those in the right side; their walls were hypertrophied. The aortic sigmoids were perfect; the aorta very small, but otherwise healthy. The anterior portion of the upper lobe, and anterior and inferior portion of the middle lobe of the right lungs, were pale, exsanguine, and but slightly crepitant; this condition being obviously the effect of compression by the right auricle. The posterior portion of the lung was congested, the anterior firm, and but feebly crepitant, as if from compression. The upper lobe of the left lung was healthy, the lower much in the same condition as the corresponding one on the right side. The trachea was very small throughout, and there was a manifest narrowing about an inch and a half above the bifurcation; both bronchi were compressed and flattened.

Upon comparing the history of this case, as well as the appearances observed on inspection after death, with the chain of functional derangements and organic changes, which, as I have been endeavouring to shew, we should expect *à priori* to result from defective expansion of the lungs, we shall at once perceive that they are nearly, or I may say, entirely identical. We are therefore, I think, justified in assuming that such defective expansion, when it exists, is capable of producing the disease which was here observed; but as there is a tendency amongst pathologists, or I should rather say amongst morbid anatomists, to assign as the primary lesion that which is most notable and obvious, it may be well to inquire whether this might not have been a simple case of hypertrophy of the right side of the heart. Now, if I mistake not, it would be very difficult to shew how an increase in the size and strength of the right ventricle could cause a delay in

the pulmonary circulation, impede the development of the lungs, and cause a narrowness of the trachea; and, further, that there is every reason to doubt, or even to deny, the existence of such a thing as idiopathic and primary hypertrophy of the muscular parietes of the heart in any case; for it is contrary to the analogy of other muscles to find an increased development independently of increased activity, whereas continued and increased activity is always followed by a corresponding increase of nutrition. And, as regards the heart itself, we always find, excepting in very debilitated subjects, that any persistent cause of obstruction to the flow of blood from one of its cavities is always found attended by hypertrophy of that cavity, whereas I am acquainted with no instance of hypertrophy without some source of obstruction or excitement.

Congenital narrowness of the pulmonary artery might indeed be supposed capable of producing many of the results which were here observed; but the structure of that artery was perfectly healthy; and without strong proof to the contrary, I am much inclined to disbelieve the existence of such a thing as an artery, whose tunics are naturally healthy, being too small for the current of blood which it is intended to convey, such a disproportion being at variance with that of the adaptation of the size of an artery to the part supplied by it, which we have already noticed.

There was one remarkable exception to the narrowness in the orifices of the heart which was observed in the above instance, namely, the great size of the right auriculo-ventricular orifice. Now, if we suppose that the right ventricle had no means of emptying itself but through the pulmonary artery, we shall be at a loss to understand how this could have been effected without the infliction of severe injury either upon the pulmonary artery or upon the lungs themselves; but owing to the salutary imperfection of the tricuspid valve, a large quantity of the blood which had entered the ventricle was, at each systole, got rid of, and thrown back into the great venous trunks through that valve. Thus, then, we find, in this remarkable exception to the general condition of the orifices of the heart, an additional proof of the safety-valve function of the tricuspid valve, pointed out by Mr. King, and also a reason for the absence not only of pulmonary apoplexy, but also of any injury of the tunics of the pulmonary artery.

Another inquiry which suggests itself, in regard to the etiology of this and similar cases, is whether the diminished capacity of the chest might not have been the cause of the defective expansion of the lung. Now it appears agreeable to the analogies to be drawn from other parts of the body, to suppose that the softer and more important structure gives form to the harder and less important, rather than the harder to the softer, as the skull is indented by the convolutions and vessels of the brain, and bone is absorbed before the pressure of an aneurismal tumor; and, accordingly, the bones of the chest, provided they are healthy, and not the subject of rachitic or other disease, adapt themselves, in form and capacity, to the viscera which they are required to contain; so that, although rachitic distortion, or other diseases of the osseous system, as well as the contraction of false membrane effused in pleuritic inflammation, may, by compressing the lungs, give rise to disease resembling that which I have been describing, still in this, and similar cases, where the bones appeared well formed, and where there was no disturbance from any other cause, it is more probable that the small capacity of the chest was the effect of the diminished bulk of the lungs, than that the converse was the case.

Again, are we to regard the smallness of the trachea as cause or effect of the diminished capacity of the lungs? Now this is a question which, I think, we are at present hardly in possession of facts enough to enable us to answer. We should certainly be inclined, *à priori*, to expect that the size of the duct would be dependent upon the size and activity of the gland, rather than that the contrary would be the case; but in speaking of the lungs and trachea, we should remember that the trachea is not the mere efferent duct of the lungs, but it is also the afferent duct by which atmospheric air, which is necessary for the performance of their function, is conveyed to them; so that, regarding it in this light, we should suspect that the size of the trachea would materially affect the development of the lungs; and it has been ascertained, as in the case of the monkey quoted by Dr. Stokes from Reynaud, that obstruction of a bronchus causes atrophy of the lung to which it leads; but, on the other hand, some cases which I shall have occasion to notice hereafter seem to show that the trachea is small where there seems to have been a defective expansion of the lungs from causes acting more directly upon them than upon it. Upon the whole, then, without further data, I think that we must regard the lungs and large air passages as one entire apparatus, the different parts of which are developed proportionately to each other.

Now it is worthy of notice, that the patient whose case we have been considering lived in a narrow, ill-ventilated, and ill-drained lane in Bermondsey. She was therefore exposed to a disagreeable atmosphere, loaded with the nauseous exhalations from drains and tan-pits, which

would impede the exercise, and consequently check the development, of the respiratory apparatus; and, further, these exhalations, being the products of the decomposition of organic matter, would, if absorbed into the system, be prone to pass out of it by the liver and kidneys, and consequently act as stimulants to those organs; so that there was a two-fold agency in operation, tending to repress the activity of the organs of respiration at the same time that it excited that of the auxiliary excretory organs—the liver and the kidneys; the effect of which was manifest as well during life as after death. Of the liver it may be true that its disorganization depended more upon mechanical than physiological causes; yet it is probable, from the state of the evacuations, that at an early period it was a highly active organ; for it was obviously enlarged when I first saw the patient in 1837: yet she was not observed to be at all jaundiced till March 1841; whereas it is probable that, had the liver been mechanically distended, a condition which would have checked its action as a secretory organ, some tinge would have been observed at an earlier period. Of the kidneys there can be no doubt that they were in a state of great activity till near death; and it is to this circumstance that the relief which was often afforded to the patient was in a great measure attributable. It should be observed, that although this patient lived surrounded by the causes which excited the original disease, and must therefore have tended to excite it, she was in other respects under favourable circumstances, not having been subject to privation or exposure, and not called upon to make any excessive exertion; so that the absence of any of those complications which such disturbing causes would probably have excited, allowed the primary affection to develope itself to the fullest extent.

ON

DIFFERENT FORMS OF GRANULAR DISEASE OF THE KIDNEY.

By J. D. Heaton, M.D.

[Continued from page 683.]

(For the London Medical Gazette.)

Ann Cox, aged 57, admitted under Dr. Thompson, June 28, 1841. A widow, the mother of nine children. She has a very emaciated appearance, with an anæmic, sallow complexion. She has been deserted by her husband, who has left her in great destitution for the last twelve months; she denies having been intemperate; has previously had good health.

About nine weeks ago, she had an apoplectic stroke, which came on quite unanticipated; she was deprived of consciousness for some minutes, and the left leg was paralysed for two days, after which she regained the use of it. Soon after this, the legs and feet became œdematous, and the abdomen is stated, also, to have been dropsical. She had great oppression of the breathing, and a sensation of suffocation. No observation was made as to the state of the urine at this time. The patient received medical treatment, but without benefit. For some weeks she has been almost quite unable to lie down, from the great dyspnœa caused when she is in that posture.

At present, great debility and dyspnœa, amounting almost to orthopnœa, rarely allowing her to lie down, are her chief complaints. She has a sensation of sinking at the epigastrium, and much depression of spirits. She has headache; the intellect seems dull and oppressed. There is an aching pain in the loins. Tongue rather brown, almost dry; bowels active; abdomen rather tender, not distended. Pulse frequent, small, and sharp, the pulsations being very visible at the wrist. The arms and legs were marked with numerous small, dark-coloured petechiæ, of the nature of purpura. The feet very cold; the legs and thighs highly œdematous, but no dropsy of other parts. Extensive dulness of stroke-sound over the cardiac region; sounds of the heart obscure; each sound is accompanied with a murmur. Respiratory sounds healthy. Urine scanty, of a natural appearance, but depositing albumen copiously on adding the usual tests; sp. gr. 1015.

℞ Sodii Chloridi, gr. x.; Quinæ Disulph. gr. ij.; Acid. Hydrochlor. dil. ♏ vj.; Infus. Cascarillæ, lb. ss. M. ft. haust. ter die sum.

On the 30th, the tongue was less brown, and there appeared rather more activity of the mind; but other symptoms were not much changed.

Fiat Haustus c. Sodii Chloridi, ℈j.

℞ Pulv. Digitalis, gr. j.; Ext. Gentian. gr. iij.; M. ft. pil. 8vâ quâque horâ sumat.

July 2d.—The patient has sunk into a state of low muttering delirium, scarcely conscious of anything that is said to her, but talking unconnectedly to herself. She has complained of pain in the loins, which part seems tender on pressure. Pulse 108, rather resisting; tongue dry and adhesive. Legs œdematous as before. Urine very scanty, and highly albuminous.

Repetantur Pulveris. Omitte Misturam.

℞ Potas. Bicarb. ℈j.; Infus. Diosmæ, ℥iss. M. ft. haustus ter die sumendus.

5th.—The patient is in a constant doze; gives no answers to questions, but will put the tongue out when desired. The urine is passed involuntarily, but very scantily. Pulse 100, very small and feeble. Tongue moist and glazy. She takes nothing but wine and water.

Omitte medicamenta. Habeat Vini, ij. quotidie.

9th.—The patient had been in a state of almost continued sopor since last report, till yesterday evening, when she suddenly aroused from the soporose state in which she previously was; her senses returned, and she sat up in bed, and appeared rational and collected. At the time of this report she answers questions readily, though in rather a wandering manner. She is craving for food, having eaten nothing for some days till this morning, when she had a large mess of arrow-root, with wine and bread. She has passed about two pints of urine in the ordinary manner, rather dark, depositing a flocculent cloud on standing, but not containing a trace of albumen—sp. gr. 1013. The tongue is moist, quite clean, but glazy and rather adhesive. Pulse 88, small and feeble, but its movements very visible. In addition to the dropsy of the legs, the face has now become œdematous on the right side.

12th.—The patient has sunk into her former state of sopor; the pulse has risen again to 100, but is very feeble. The tongue quite dry; face very œdematous. Bowels have not been moved for two days.

Statim Sumat. Ol. Ricini, ℥ss.

13th.—The patient died this afternoon, being in a comatose state before death.

Sectio cadaveris, post-mortem horas xxii.

External appearances.—The body is much emaciated, and had a sallow, bloodless appearance. On the inner sides of the arms and legs were petechiæ of a dark red colour and irregular form, most of them being small, and in irregular groups, a few on the thighs isolated, and of the size of a sixpence. The arms were not at all œdematous, but the whole of the lower extremities very much distended with serum; there was much œdema of the right side of the face.

Thorax.—On opening the chest, about a pint of serum escaped from each sac of the pleura. There were no inflammatory appearances of the serous surfaces, with the exception of some fine vascularity posteriorly on each side. The lungs were rather compressed by the fluid, but were quite crepitant, and had a healthy appearance. On cutting into them, a great quantity of frothy serum oozed out. The pericardium contained about ℥ij. of serum. Towards the base, both on the heart and on the inner surface of the pericardium, was a granular deposit of lymph, of a pink colour, thin, and apparently recently deposited, but forming no adhesions. The left ventricle was dilated and much hypertrophied; the outer walls, towards the middle, were about half an inch thick; the musculi pupillares of the mitral valve much enlarged, their apices indurated and degenerated into a fibrous structure; the laminæ thickened and contracted; the aperture did not deviate much from the natural size. The right ventricle not much altered from its natural appearance, but the right auricle as well as the tricuspid orifice much dilated. There was some thickening of the aortic valves, a little within the free margin, and the adjacent borders of two of the valves were adherent. The heart weighed seventeen ounces.

Abdomen.—There was no serum in the cavity of the peritoneum. This membrane appeared quite healthy and free from marks of inflammation except over the liver, where it was rather thickened and opaque, but without adhesions. The liver was small in size, but appeared healthy; the gall-bladder was much distended with dark viscid bile, and all the viscera in the neighbourhood were tinged of a dark colour by the exudation of the bile. The liver weighed lb. ij. 7 ounces. The mucous membrane of the stomach presented large patches of dark punctiform redness. The duodenum contained much dark bile of a similar appearance to that in the gall-bladder. The spleen appeared healthy; it weighed 5 ounces. The splenic artery was indurated by a calcareous deposit of white opaque patches, and rings, so as to form an unyielding tortuous tube. The kidneys both presented a very similar appearance. Each was much contracted. When the capsule was removed, the surface underneath was granular or tuberculated, but not very even, the granules being of uniform size. The colour was a deeper red than is usual in this disease; the substance was hard, but brittle. The cortical structure was much diminished, forming only a thin layer around the cones of the tubular structure. The tubuli were quite distinct in the pyramid, and did not appear to be invaded by the morbid deposit. There was a small serous cyst in the cortical structure of the right kidney. Each kidney weighed 2½ ounces.* The bladder was much contracted; it contained from three to four ounces of dark coloured urine.

Head.—On removing the dura mater from the hemispheres, the two layers of arachnoid were found to be adherent along each side of the falx major; in some parts by fine fibrous cords, varying in length from half an inch downwards; in other parts

* Models of these kidneys are preserved in the museum of University College.

closely united. There were no adhesions in other parts, but the arachnoid had a rather milky opalescent appearance. The large veins on the surface were distended with very black blood; but there was also much fine vascularity in the intervening spaces. On removing the brain, a small quantity of serum was found at the base. The substance of the brain was very soft, and in removing it, the lateral part of the right hemisphere gave way, and a considerable quantity of imperfectly clotted blood ran out from the laceration. Farther examination showed that both lateral ventricles were filled with dark blood to the amount of three or four ounces altogether. The cerebral tissue around was completely broken up and disorganised, being reduced to a soft pulpy mass, of the consistence of thick cream, of a pale yellow colour, most extensive on the right side. The optic thalami and corpora striata, were quite destroyed; the septum lucidum was broken up. All the cornua of the lateral ventricles were filled with blood, which likewise penetrated into the third and fourth ventricles, and externally on the surface of the medulla oblongata all the parts of the brain appeared softer than natural, and the cineritious part pale, and of a dirty white colour. There was no bad or gangrenous odour in any part of the brain. All the arteries at the base, and their larger ramifications, were much diseased, being rendered extremely fragile by irregular patches of opaque friable matter deposited in their coats.

In addition to the disease of the kidneys, the concomitant disease of the brain gives to this case much interest, of which, however, in a great measure, it would have been deprived, had the post-mortem examination been omitted.

The history of the case previously to death is such as frequently presents itself in connection with granular disease of the kidneys. The comatose symptoms which preceded death are those in which this malady frequently terminates, and might be regarded, as has been already stated in a previous contribution, as the result of the poisonous effect upon the system of urea not excreted. The sudden disappearance of the comatose symptoms for a time, a few days before death, was certainly remarkable, but occurring, as it did, in connection with a much increased discharge of urine (which, even though free from albumen, had a specific gravity of 1015, shewing a considerable impregnation of urea), I had been induced, in my own mind, to refer it to this temporary removal of much of the poisonous principle from the blood. But, when the examination of the brain disclosed such extensive disease, and of parts of this organ so important and central as already described, and which, from its appearance, we cannot but suppose to have existed for a considerable time, we wonder how this would be compatible with the amount of sensation and volition, and indeed, in some degree, of the higher mental powers, as must have coexisted with it. Had the parts of one hemisphere alone been affected, the case would have been less remarkable; but both were very considerably diseased, though not to the same extent. The softening of the brain is, in itself, sufficiently intelligible, occurring in connection with extensive disease of the arteries, incapacitating them for carrying on an effective circulation through that organ. It presented that yellow appearance—without vascularity, and devoid of the fœtid smell of gangrene—frequently met with around large extravasations, and in connection with disease of the nutrient arteries. It is that sort of softening which Abercrombie supposes analogous to dry gangrene of the leg from disease of the arteries; and quite different from the softening the result of inflammation, and accompanied with the putrid odour of gangrene. The apoplectic fit, and the extensive extravasation which was found in the brain, also receive a ready explanation from the disease of the arteries. Perhaps the vessels were first ruptured, and some extravasation took place at the time of the fit; but we should suppose that the hæmorrhage must have been then of comparatively small amount, and there must have been a gradual oozing of blood since; for so extensive a discharge of blood into the substance of the brain occurring suddenly must have proved immediately fatal. The adhesions between the layers of the arachnoid were remarkable; they were evidently of long existence, and not the result of recent inflammation. Adhesions between the opposite layers of arachnoid are, I believe, not common under any circumstances; but the existence of *bands* of false membrane, of an appreciable length, between membranes in close apposition and incapable of motion, appears very unaccountable, and is what I have never met with in any other case, either described or at which I have been present. The impossibility of motion in the parts contained within the cranium renders it very difficult to explain the formation of these bands; they were very numerous, most of them short and fine, and connected in groups, but some of them were isolated, and nearly half an inch in length. Perhaps the most probable supposition is, that an inflammatory adhesion had taken place between the two serous surfaces at this point, in infancy, and that a serous effusion had afterwards intervened, and drawn out the lymph into these bands, while the skull was yet

sufficiently yielding to allow of this distension without producing fatal compression of the brain.

The other points to be noted in this case may be briefly discussed. Previously to the supervention of the comatose symptoms, the case presented the characters of an ordinary uncomplicated case of granular disease of the kidneys. The urine was scanty in this instance. The amount of watery fluid which may pass through the kidneys varies very much in this disease; frequently, in old cases, it is more than natural: in this case, as in many others, it was much below the average quantity; but in all it presents a deficiency of its natural ingredients, and generally, perhaps always, at some stage of the disease, it is marked by the presence of albumen. The form of dropsy peculiar to this disease is that of the cellular tissue; where effusion into the serous cavities takes place, it is generally either inflammatory or depends on concomitant disease of other organs. In this patient there was no ascites at any time; a considerable quantity of serum was found in the chest after death; but as an examination had been made during life without any signs of this being discovered, it is probable that this effusion occurred only towards the close of life. So also with regard to the inflammation of the pericardium, which appeared to be quite recent, and had produced none of the usual symptoms of pericarditis during life. The heart was hypertrophied to almost double its natural weight, the left ventricle being the principal seat of the enlargement. The old disease of the valves, and likewise the very diseased state of the arteries, would account for the hypertrophy, which, on the other hand, would itself greatly increase the danger of rupture of the vessels.

The kidneys presented the ordinary appearances of a rather advanced stage of granular degeneration, the contraction and atrophy being, however, principally confined to the cortical tissue, the tubular part being not much affected. With regard to their dark colour, Christison remarks, that when the kidneys are much contracted, the proper brownish tint is often found present; and it is in kidneys where the disease is less advanced that the pale brownish yellow colour is observed. The present instance corresponds very well with this observation, though I have seen other cases which did not so; and it seems difficult to account for this return of colour in connection with the increasing contraction, which produces an increasing atrophy of the natural tissue, and presents, to the entrance of the red blood, an increasing obstacle. Probably, from the first, there is something different in those cases which present this dark appearance of the kidneys in the post-mortem examination.

CONTRIBUTIONS TO ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.
Lecturer on Anatomy and Physiology, and Corresponding Member of the French Academy of Medicine.

[Continued from p. 610.]

On the Corpus Luteum.

Whilst inquiring into the history of the corpus luteum in woman, my brother suggested that a re-examination of some points in the anatomy of the same body in the ewe, cow, &c. might lead to useful results. The following remarks were the result of this inquiry. Aware of the vast influence of specific differences, I have done my best to avoid all forced analogies; the corpus luteum is a structure of an unknown intimate nature, and of an unknown function, whatever may be said to the contrary. To me it appears to belong to the embryo, or at least to the ovum; an intrinsic not an extrinsic part; it probably slightly resembles in function the placenta, which it precedes; it represents the calyx of the ovum (fecundated or not) which has left, or is about to leave, the ovarium; with this important difference, however, that as found in mammals it is a rudimentary structure connected with the transient existence of a node of growth peculiar to the reptile and the bird; the vitelline and allantoid development, or growth, which in man and in mammals is fleeting, momentary as it were, and rudimentary. This theory may, no doubt, be expressed otherwise, for it simply amounts to this—the law of unity, as regards the embryos, includes the rudiments and elements of all nodes of embryonic growth; in this respect all start at first from the same point, and with corresponding or even strictly similar parts. But according to the species must the mode of growth or development differ: let us say that these modes of growth are, 1st, vitelline; 2d, tubal; 3d, uterine and placental: in the bird, fish, and reptile, we have specimens of the vitelline development; in the marsupialia perhaps of the second, and in man and in the mammals, strictly so called, of the third, or uterine, strictly, and placental. But as all sprung from an egg, or ovum, so the vitelline stage of development must exist in all,

however brief the period may be. Thus in man, the vitelline period, confined to a few days, is probably passed wholly within the ovarium, to be succeeded rapidly by the placental mode of existence; whilst in the bird, and fish, and reptile, the embryo, extruded from the parent, depends wholly on, and exists wholly by, its vitelline structures.

Thus it happens that in the ovaria of the more complex forms of animal existence we find the remains of rudimentary structures whose functions, if they really performed any, were necessarily fleeting. The fallopian tubes of woman have been called oviducts; in one sense, no doubt, they are so, but still the term is a vicious one, and calculated to mislead, if the persons who give to these tubes such terms really propose comparing them to the oviduct of the bird, fish, or reptile. The fallopian tubes are strictly uterine parts, and not mere oviducts. The ovum passing along these tubes is totally unlike the ovum of the bird on its way through its oviduct; the one carries with it the whole materials for its vitelline existence, the other has abandoned these in the ovarium. A very small portion of the extremity of the fallopian tube may be likened to a real oviduct, but nothing more; the greater part of the tube is strictly uterine.

Between the bird and man, representing the two extremes of vitelline and placentary existence, there are probably intermediate links, but they have not been satisfactorily made out. The uterine existence of the embryo may be shortened, or even wholly left out; but this reminds me that I anticipate what it is my intention to explain more fully in Part V., in which I hope to be able to examine the various theories proposed as to the functions of the corpus luteum: in Part VI., the history of the developement of the placenta and its uterine connections will be carefully inquired into*.

Part III.

On the Corpus Luteum in Brutes.

Taking it for granted that the lecture on generation delivered by Sir Everard Home contains many of the facts made out on this subject by John Hunter, and that the engravings illustrative of that lecture were from dissections made by Hunter, we have gone over the lecture with the greatest care; and with a view to get at the truth and the facts ascertained, we shall confine our attention in this, our third Part, to what is stated with regard to the evolution of the ovum in the lower animals.

Sir E. having alluded to the importance of the subject, and mentioned that Harvey had completely failed in elucidating any thing in the inquiry, makes the following observation with regard to Mr. John Hunter. The subject "became deserving of the consideration of J. Hunter, who has left us, in his collection, a series of preparations shewing the state of the womb on almost every day after impregnation had taken place in the ewe; but his experiments were attended with no better success than those of his great predecessor—Harvey."

In another passage Sir E. states, "De Graaf, Kirkringius, Haighton, and Cruikshanks, were confident that ova were to be met with in all sorts of females, but by mistaking the formation of the corpus luteum for the effect of impregnation, which at that time was an error generally adopted, and, what is sufficiently singular, now, in 1840, universally acted upon and believed, they got entangled in theoretical opinions, that misled them in their future inquiries, and rendered such parts of their statements as were true unsatisfactory."

"The corpus luteum, from its appearances, seems to be entirely a new formation, distinct from that of the ovarium itself; it is always met with in the substance of the ovarium (?)" not in the cells (Graafian vesicles?) "In its increase it compresses the parts surrounding it so much that when of its full size, and even where there are several in the same ovarium, that body (organ) is not much increased beyond its natural dimensions."

We will have occasion to shew that this is by no means the fact, at least in the ovaria of the sheep and cow. Even in woman, as we have shewn in Part I. of these Contributions, the difference in size and weight is considerable.

"The structure of the corpus luteum is of a very particular kind, and is not distinctly seen in small animals, or

* The whole of the following part was drawn up by my brother, Mr. F. J. Knox.

those that have numerous litters; but in the cow, which commonly has only one calf at a birth, the corpus luteum is so large that when it is magnified the structure can be made out."

The intimate structure may certainly require a magnifier to make it out, but the anatomical arrangement of its parts may be seen with very ordinary sight without the aid of any microscope.

"It is a mass of thin convolutions, bearing a greater resemblance to those of the brain than of any other organ."

We feel rather inclined to compare it to a glandular structure.

"Its form is an irregular oval, with a central cavity."

Most unquestionably there is not the slightest appearance of a central cavity in by far the greater number which we have examined.

"And in some animals its substance is of a bright orange colour when first exposed."

Reference is here made to plate 112. This plate represents, at figs. 1 and 2, ovaria of a cow at two months old; and figs. 3 and 4, fourteen days after impregnation. The ovaria externally present the appearance of numerous Graafian vesicles, but not the slightest appearance of corpora lutea, either externally or on the section: the sections shew numerous Graafian vesicles cut across, and here and there appearances of blood-vessels. We would remark, that the whole history of the engraving should be given, as most assuredly the *recent* ovary, when cut across, never presents the appearances delineated in the plate.

"Corpora lutea are found to make their appearance immediately after puberty, and continue to succeed each other as the ova are expelled, till the period arrives when breeding no longer goes on.

"As the object of these observations is to prove that corpora lutea are the glands formed purposely for the production of ova, that they exist previous to, and are unconnected with, sexual intercourse, and when they have fulfilled their office of forming ova, are afterwards removed by absorption equally, whether the ova are impregnated or not."

Reference is here made to plates 108, 109, 113, 114. Plate 108 represents the embryo (a large human fœtus), exposed by laying open the ovarian cyst which enveloped it. This reference appears to us singularly and amusingly unfortunate, as by it one might be led to suppose that not only the ovule but a completely developed fœtus may be formed in the human virgin ovary. But in fact, of the plates referred to, it is evident that 113 and 114 are the only two connected with the remarkable and important passage in the text. 113 are (is) the ovaria (ovarium) of a cow unimpregnated. The external view, fig. 1, shews the appearance of Graafian vesicles; fig. 2, a longitudinal section; and fig. 3, a transverse section of a corpus luteum. Now, in the first place, we should say that the ovarium represented can scarcely be the one containing the corpus luteum, as when this body is present the form of the ovarium becomes greatly modified by its presence. In the second place, the delineations of the sections themselves most assuredly do not resemble strictly the corpus luteum as seen by ourselves. There is scarcely even an attempt made to shew a central cavity, and in which there should, to correspond to the description, not only have been a central cavity, but an ovum in it.

"The cow is considered to arrive at puberty at two years old. I have, however, met with the instance of a calf within the year having bred.

"In the hog, the age of puberty is six months, although at four months the ovaria are not found to have any appearance of incipient corpora lutea. At five or six months, several corpora lutea have made considerable advance."

A reference is here made to plates 113 and 114. Now, 113 refers to the ovum of the cow; but 114 is clearly the plate alluded to in the text. There is represented at figs. 1 and 2, ovarium and its section of a sow four months old; figs. 3 and 4, ovarium and section before six months; and figs. 5 and 6, ovarium and section at full six months (*i. e.* in a sow six months old.) This plate is a very satisfactory one; both the external views and their section exhibit the appearance of numerous Graafian vesicles, more particularly in No. 2 (that is, at four months); in No. 3 the vesicles are less distinct and fewer, whilst here and there are represented sections of the corpora lutea. No. 6, the vesicles are still fewer in number, whilst six corpora lutea appear to have engrossed nearly the entire

ovarium; there is one large vesicle near the surface. The only remark we have to offer is, that these corpora lutea bear an extraordinary resemblance to the human structure; but what is to be particularly noted is, that they resemble the human when the structure must be presumed to be on the decline, *i. e.*, at the second, third, fourth, or fifth month after impregnation.

"In another virgin sow, nearly six months old, we were so fortunate as to detect corpora lutea in the act of bursting for the expulsion of the ova."

If our author had only given the fact—we mean, if he had made a dissection and found the ova—the proof would then have been complete. Without this proof, the observation goes for nothing.

"It is decided by this proof that females part with ova whether there is sexual intercourse or not, and with such force that the cavity of the corpus luteum is absolutely inverted, so that the ovum is completely exposed to the semen of the male. The extravasation of blood in rupturing the ovarium, and inverting the corpus luteum, is in many instances so great, that some of it passes through the vagina, which, when met with after the female has had the male, is considered as a proof that impregnation has taken place. As soon as the ovum is expelled, the corpus luteum recovers itself and regains its former state."

We have thus extracted with the greatest care whatever observations bear on the subject as connected with the lower animals.

That Mr. Hunter's observations and theories were mostly drawn from observation and experiment on the lower animals is sufficiently clear. And as it is also unquestionable that most of the present existing theories on generation and its phenomena are based on the few original facts made (would that they had been also promulgated) by John Hunter, we shall confine our observations in this (Part III.) to an examination of the subject in the lower animals.

January 12th.—Of a number of sheep slaughtered for the market the uteri of twelve were sent me. The sheep were all about twenty-one months old, and were called gimmers by the practical man. They had been kept as carefully from the male as possible, as they were not intended to breed. It was admitted, however, that in the autumn a tup may have got amongst them, and a few, therefore, might be with lamb.

Dissection.

The uterus externally presents no peculiar appearances, and is of a dark yellowish hue. Upon laying open the uterus throughout its whole length, we find no appearance of vascularity, or any contents. There are numerous little mammillary flattened eminences, the spaces of most of which are coloured of a distinct inky black.

Each of the ovaria presents the appearance of large prominent glandular looking bodies, with numerous vesicles (Graafian ?). The glandular bodies assume, invariably, the appearance and position as represented in the figure No. 1, when floated in water or spread on a flat surface. The fimbriated margin of the uterine (fallopian) duct passes from the external pole of the ovarium, and sweeps away towards the horn of the uterus: the entire fimbriated margin appeared to us peculiarly and beautifully formed, and arranged to grasp or encircle the ovarium, so as to receive the ovule on its being evolved. The laminæ represented in the figures* seen passing from the orifices of the duct appeared to us distinctly muscular. The arrangement of the peritoneum is here very peculiar, for it forms a band from what may be considered the horn of the uterus, to the distal pole of the ovary, in the margin of which we find two laminæ forming the fimbriated margin. And this is much shorter than the uterine duct, which I found, on careful dissection, to be rather more than seven inches long. The two folds of the fimbriated margin appeared to us to be double, *i. e.* composed of two tunics each; for whilst the external surface has the smoothing proper to the peritoneum, the inner surfaces, or those which come in contact when the laminæ close upon themselves, presents, as I have said (when examined under water,) first, the numerous plicæ or folds, all running from the direction of the extremity of the uterine duct, whilst the whole surface presents the delicate villous appearance of a mucous membrane.

In the right ovarium, fig. 2, when

* It has not been thought necessary to give the figures.

cut in its long axis, I find one large glandular looking body: it formed the projecting mammillary looking point seen in fig. 1. The whole ovary is very vascular. The interior of the glandular looking body shews no appearance of a central cavity. In making the section I divided two cysts, Graafian vesicles, and a small yellow body, about the size of an ordinary pin-head: it appeared to me distinctly glandular.

The left ovarium, upon a section being made, presented very nearly similar appearances, with the exception, perhaps, of less vascularity.

No. 2.—*Uterus precisely as in* No. 1.

Both ovaria appear externally to have large corpora lutea projecting from their surface, and Graafian vesicles are numerous on both ovaria.

Right ovarium, at its most prominent part, presents the appearance of a small rounded opening in the centre of the projecting portion of the glandular body, which indeed resembles strongly the appearance of the partially everted cloaca of a fowl: upon this everted surface there appears not the slightest vestige of peritoneal covering, a vertical incision displays no central cavity.

Left ovarium upon being cut into, but in an opposite direction, presents precisely similar appearances; the yellow glandular looking body is four lines in one diameter, and probably as large as this body ever attains in the sheep.

No. 3.—*Uterus similar to the preceding.*

Right ovary presents two distinct corpora lutea.

Having made the dissection, I proceeded to make four transverse sections of one of these corpora lutea, and although done with the utmost care (under water), I could by no means distinctly make out a central cavity, my bristle appearing rather to have passed between two conglomerate masses. The body extended into the interior of the ovarium to the extent of nearly five lines, and in fact nearly touched the other or superior corpus luteum. Between the two, and consequently in the axis of the poles of the ovary, the interior seemed nearly composed of blood-vessels, still full of blood. I cut through a set of still more minute vessels, which appeared to me to be empty, as if they had performed their office, and were now contracting previously to disappearing altogether.

The cysts giving the organ so much the tubercular appearance were regular cysts inside the dense fibrous envelope of the stroma of the ovary and its peritoneal tunic. One large one, which I opened with care, was full of a fluid, which, on escape, assumed an opaque membraniform appearance, and I observed three or four white granules, soft, mucous.

I observed that the tunics of the ovary had merely become extremely thin outside, not only the cyst, but the corpora lutea, and I traced a distinct lamina over the projecting yellow body; the transverse sections shewing very perfectly the gradual thinning of the proper ovarian coverings, and that the yellow body penetrated quite to the centre of the ovary; the cysts being immediately outside these yellow bodies.

The left ovary presents externally no corpus luteum, but numerous small yellow points, and many Graafian vesicles on its surface: on being cut into, it proved to be very vascular, vessels carrying red blood; the yellow spots quite visible; and these seem to be inefficient corpora lutea, and quite distinct from the Graafian vesicles: we saw these two textures unquestionably very near each other, but the corpora lutea have no tendency to surround the other.

No. 4.—*Uterus as in the preceding.*

Ovaria have large corpora lutea in each, and the Graafian vesicles are also very numerous. The ovaria are extremely vascular: right corpus luteum when cut into presents appearances in every respect similar to No. 3. This preparation had been a night in water, and the textures in consequence much swollen.

Left corpus luteum, however, being cut in successive slices horizontally, from the most prominent part towards its base, presented on the second slice being removed a rounded cavity, surrounded by a distinct membrane. This cavity appears to have been nearly circular, capable of containing a large pin-head, or about a line in diameter. We observed nothing escape from it when exposed; the interior is perfectly smooth and moist. Its investing membranes send processes outwards into

the yellow body. The cavity is spherical. On returning to the right ovarium, and making a similar horizontal section of one half, it was easy to see that the cavity existed in it also, but was not so large. In both cases there is a slight appearance with the surface of the corpus luteum from this cavity.

No. 5.—*Uterus perfectly similar to preceding.*

Left ovarium presents a very distinct and prominent corpus luteum, with a projecting part as described in No. 2, and a distinct hole in the centre. A bristle passed into the hole penetrated readily to the extent of four lines. On laying open the canal in which the probe lies, and cavity to which the probe leads, a very delicate membrane is found to invest both, and the texture of the ovarium, corresponding to the outer side of the base of the cavity, is exceedingly vascular; *i. e.* numerous vessels, with red blood in them, are cut across.

Right ovarium presents externally no appearance of a corpus luteum, but a small depression on the surface, on being minutely examined, shewed a minute orifice, and this being followed was found to lead to a distinct corpus luteum, about half the size of that in the left ovary. A central cavity is also obvious in this one.

No. 6.—*Uterus similar to last.*

Ovarium (right) at least twice the size of the left, presenting a very distinct corpus luteum in the usual situation; the peritoneal tunic on the most prominent part is so delicate as not to be distinctly visible, if at all present.

Left ovarium presenting only a few Graafian vesicles, but on cutting into the organ we see the commencement of a corpus luteum: it is commencing at the same position of the ovaria as in the specimen of complete development.

On returning to the corpus luteum in the right ovary, although examined and sliced with the greatest care, no orifice on the surface could be detected, and no canal or cavity was found in the centre; a minute white vesicular looking body was observed in making one of those sections nearly about the centre of the corpus luteum.

I may here make a remark which will apply not only to the ovaria just described, but to many others: it often happens that numerous vesicles, presumed to be Graafian vesicles, are found in the same ovarium of different sizes; some very considerable. And this is the case as well in an ovary where there is a corpus luteum, as in one where there is no such appearance, at all events externally. Now, we have never happened to observe that around these vesicles there is the slightest appearance of a yellow body forming, nor any unusual vascularity, either of the membranes composing the vesicle, or of the surrounding ovary.

[To be continued.]

RECORD OF CASES.

By Thomas Mayo, M.D. F.R.S.
Physician to the Infirmary of St. Marylebone.

[Continued from page 615.]

Erysipelas.

There is no disorder in which the principles of treatment have been more broadly and positively stated, and, at the same time, in which less care has been taken to reconcile the differences which they involve, than erysipelas. It is not pretended, in this censure, that remedies of contrary kinds may not be (even simultaneously) efficient towards a given object; since the large incisions of Mr. Lawrence, and the bark of Dr. George Fordyce, may both tend to relieve an oppressed circulation; but it may fairly be alleged, that the cases, or the precise periods of a given case, in which the one or the other of these principles is most appropriate in the treatment of erysipelas, have not been brought out with clearness or precision. Accordingly, a certain

"Metus audax et fiducia pallens"

seems present whenever the practitioner avails himself forcibly, in this disease, of either class of agents. Here, then, according to the views submitted in my first contribution (p. 516), an inquiry is wanted, "which may separate from each other, and individualise in relation to treatment, cases of the same kind."

The distinctive phenomena of erysipelas may present themselves either in a slight erythematic form, with a partial and well-defined flush upon the face, or other parts of the person, attended with tingling and heat on the affected surface, with general feelings of slight indisposition and depression

of spirits; and these symptoms may depart after a few days with little or no febrile excitement: or they may form the leading phenomenon in a specific fever with cerebral congestion, and generally with extensive swelling of the head and face tending to vesication. Or the erysipelatous state may ensue upon local wounds and injuries, often terminating, under these circumstances, in phlegmonous inflammation.

The second head of the above division, namely, the erysipelatous fever, is that to which I shall endeavour to afford some cases illustrative of treatment, principally in its reference to the above discrepancy.

Sarah Taylor, aged 76, was brought into the Marylebone Infirmary, Dec. 20th, 1842. Her illness commenced the day before, with a rigor, and a sense of heat and weight in the head. The left cheek and forehead were discoloured and slightly swelled, and a throbbing and shooting sensation was experienced; the bowels open; urine copious (at first); tongue not remarkable; pulse small. I prescribed—

Hyd. Chlorid. gr. j.; Pulv. Antimonial. gr. iij. ter. Haust salin ammoniat. ter.

22d.—The erysipelas had spread; head more painful and heavy about the temples; pulse low; bowels open; skin hot.

Perstet. Emplast. Lyttæ, temporibus duo.

24th.—Better at all points; much relieved by the blisters.

26th.—A pint of porter.

27th.—Ol. Ricini, ʒij.

Jan. 3d, 1843, 1 A.M.—Left cheek again throbbing, shooting, swelled.

Hyd. Chlorid. gr. iv.; statim. Ol. Ricini. ʒij. vespere.

4th.—Symptoms relieved; pulse depressed.

Quinæ Disulphat. gr. ij. ter.

5th.—Pulse strengthened; general appearance improved. Convalescence was now rapid; no other relapse.

Elizabeth Webb, a maid-servant, aged 32, was admitted into the Infirmary, Dec. 6, 1841. She described herself as having had erysipelas ten days. I saw her on the 7th; she had then been relieved of copious dark-coloured evacuations by the Haust. Rhei cum Magnesia. The face and head were much swelled, and smooth, but pallid. Large purple stains on her person. Tongue quivering, dryish, but little coated. Abdomen not distended. Urine plentiful. She had been delirious in the night; manner approaching to that of delirium tremens. I ordered—

Misturæ Camph. ʒiss., Ammoniæ Sesquicarbonat. gr. v. 6tis horis. Emplast. Lyttæ parv. epigastrio.

8.—Less delirium last night; tongue as before; bowels open; pulse small; face contracted.

Perstet. in usu haust. c. Tinct. Cinchonæ C. ʒj.

9th.—Delirium increased last night. Face still contracted; great restlessness.

Sumat. porter 1 pint, quotidie. Calomel, gr. ij.; Opii, gr. ss. 8vis. horis.

10th.—A swelling at the occiput had opened, and discharged pus freely.

11th.—Very delirious last night. Frequent yeasty but bilious evacuations; much apparent danger of sinking. No heat of surface.

Sumat. Pil. Calomel, c. Opio, 12mâ. quâque horâ. Olei Ricini, ʒij. cras mane. Emplast. Lyttæ Nuchæ. I allowed an additional pint of porter.

12th.—Blister had acted well. Delirium much relieved; pulse irritable, not weaker; no pain now in the head; no further discharge from occiput; free evacuations.

Perstet. in usu pil. et haust.

13th.—No delirium last night; motions free and bilious; pulse more open, and less feeble. General improvement. The porter was now left off, as sitting heavily.

Perstet. in usu haust. sumat. Pulv. Ipecac. Co. gr. v. bis quotidie.

Convalescence proceeded from this point without relapse, though slowly. The calomel entirely suspended, and sedatives given daily.

Mrs. M——,* æt. 78, a lady of a strong frame and constitution, dark complexion, who had undergone much anxiety of mind in bringing up a large family, and had, in the last four or five years, been repeatedly cupped, with temporary benefit, for a sense of weight and oppression in the head, but had received more benefit from mild cordials containing sulphuric æther, was attacked with pyrexia on the night of the 27th of December, 1842. She had complained for some days of indisposition and inappetency of food. She took some aperient pills. These acted freely in the night. The next morning erysipelas appeared on the left side of her face. That evening she vomited freely from 30 drops of Liquor. Antimon. Potassio Tart. On the 29th, at noon, I saw her. The heat of skin was moderate. The tongue was coated, and white, not dry. The pulse 76, and good. She had been very restless the previous night, and this was the character of all her nights except that of the 29th.

* In the treatment of this case a very excellent general practitioner acted with me.

Every night, to the 3d of January, this lady took Hydrarg. Chlorid. gr. ij., Pulv. Jacobi, gr. iij., Ext. Papav. gr. iss. An aperient senna draught with Sulphat. Magnes. ʒij., was given every second morning. Effervescing salines, containing Ammoniæ Sesquicarb. gr. vi.; Potassæ Bicarbon. gr. xij. 6tâ quâque horâ.

On the 3d of January, the erysipelas spreading to the other side of the face, two doses of Hydrarg. Chlorid. gr. iij. were given in the course of the day. Pulse 84.

On the morning of the 4th, the pulse had risen to 96, and was strong, though not hard. The eruption occupied both cheeks, but was desquamating on the left; she was irritable, more, to appearance, from natural temper than illness. An emplast. lyttæ had been ordered by me the day before, and positively refused by her. This I found on coming to her on the 4th. I then directed five grains of Hydrarg. Chlorid. statim, with a subsequent aperient draught; and I removed the ammonia from the salines.

On the 5th, A.M., I found the skin cool, and the pulse softened. She had passed the preceding day composedly after the calomel, and had slept rather more than usual. The exanthema had made no progress; it was less red; bowels had acted duly.

Perstet. in Haust. Salin. 6tis. Hydrarg. Chlorid. gr. iv. horâ somni. Haust Aperitiv. mane sequenti.

6th.—Pulse soft, but of irritable quickness, occasionally intermitting; manner somewhat hysterical. Skin cool. Tongue brownish and dryish; no pain in the head now, or at any other time. Spirits low. Bowels open. Mouth swelled from the Hydrarg. Chloride.

Disulphat. Quinæ, gr. j.; Ext. Rhei, ij.; bis in die. Mistura Camphoræ, ʒxi.; Ammon. Sesquicarb. gr. vi.; Sp. Æth. Nitrici, ʒss. 6tis. Veal broth.

Up to this time tea and milk, with dry toast, had been her diet; except on the 2d of January, when she had veal broth.

8th, 10 A.M.—I find that in the afternoon of the 7th an erysipelatous blush had appeared over the left leg, and several quinine pills as above had been given. A very restless night. To-day much heat over the leg. Tongue dry. Pulse 98, regular and firm; much tendency to talk about things not before her. Cucurb. cruentæ were applied, ad ʒvj., and were followed by some mitigation of restlessness, and discomfort, which, however, soon increased again, and rose so high, that at 12 nocte Morphiæ Bimeconat. ℥xv.; Tr. Humuli, ʒj; Mistura Camph. ʒiss. were given, with the effect of giving much sleep. Two draughts of Decoct. Cinchonæ, ʒiss. given in the course of the afternoon, had had no other effect than that of heating her for the time.

9th, A.M.—Much irritation, collapse, slight subsultus, muttering in sleep, quickened respiration; a good and free evacuation; sufficient high coloured urine. Wine and broth were freely given through this day. Face and leg free from erysipelas, pale.

10th, 10 A.M.—I find that two doses of the bimeconate of morphia have been required during last night to give some freedom from excessive restlessness; and she is breathing short and heavily in uneasy sleep under the sedatives. The pulse had then some strength. Free stimulation was used during the day. At half-past five the pulse was imperceptible; at seven she died.

If this fatal case, in which nō autopsy was allowed, be compared with the other successful cases here narrated, relatively to treatment, it may be surmised that the non-application of a blister through the patient's obstinacy was mischievous in the former. This surmise is borne out by the following brief memorandum of another attack of erysipelas, in which I had attended the same lady.

"July 15th, 1841.—Mrs. M—— is just recovering out of erysipelas treated by calomel, aperients, and salines, helped by a blister to the nape of the neck."

Notes thus taken at the time of an occurrence are far more valuable than recollections. I may, however, state, that I remember this attack to have been at the onset similar to the last one, and during its early stage to have run a similar course. In each attack some form of depletory relief seemed desirable; in each the advanced age of the patient rendered abstraction of blood comparatively undesirable; and in that attack in which such abstraction was made, no permanent benefit resulted.

These cases illustrate one point at least in the treatment of erysipelatous fever; namely (what I presume to consider), the valuable effects of blisters, as superseding the erysipelatous action and substituting a mild and safe form of inflammation. In one case, the disease, otherwise similar, had been successfully treated, when this remedy was applied; and took a fatal turn on another occasion when the remedy was omitted. I am well aware that here, as in other forms of disease, this remedy is inapplicable as a substitute for abstraction of blood, where youthful energy or

plethora, or other circumstances of the case, make such abstraction expedient. I wish, indeed, to afford data for a conclusion as to the limits which should circumscribe our use of remedies, in endeavouring to ascertain the extent to which they may be carried.

The following circumstances of a very recent case may afford an additional illustration of the effects of blisters in erysipelas.

Charlotte Stubbs, aged 57 years, is now, February 17th, convalescent under erysipelas. She came into the infirmary February 10th, with pyrexia, sleepiness, and weight in the head; a small quick pulse, a defined erysipelatous blush half way up the calf of the right leg, which was creeping upwards; a tongue dry, and red down the middle. The catamenia had ceased for nine years; she appeared a woman of ordinary health and strength. I saw her first on the 11th; she had then been freely vomited by an emetic of ipecacuanha and potassio-tartrate of antimony. There had been rigor, but no delirium. I prescribed a saline of sesquicarbonate of ammonia and bicarbonate of potass, neutralised with tartaric acid, 6tis. and a blister immediately at the upper edge of the erysipelatous blush on the leg.

12th.—Inflammation of leg very great, but no longer spreading upwards. Blistered surface very healthy. Pulse 96; head still heavy, and sleepiness continuing; no erysipelatous appearance there, but a flushed cheek; bowels open.

Hydrarg. Chlorid. gr. iv. h. somni emplast. lyttæ nuchæ statim.

13th.—Weight of head and sleepiness relieved; pulse soft; leg less hot, but erysipelatous blush more extensive over the foot. Bowels inactive.

Hydrarg. Chlorid. gr. iij.; Pulv. Jalapæ, gr. x. statim.

14th.—Bowels have acted largely during last night. The countenance has become more natural; the tongue cleaner, less dry in the centre. Leg much the same. I ordered another emplast. lyttæ where the first one had been, the surface being quite healed. The salines had been continued throughout. The urine being irritably passed, and scanty, I allowed two ounces of gin. The diet had hitherto been tea and arrow-root. I now allowed fish.

15th.—Redness and heat of leg and foot remarkably abated. Urine more free. The patient is proceeding most favourably*.

It is perhaps needless to observe, that in this and the other cases, the emplastra lyttæ have checked the progress of the inflammation similarly to the described effects of argenti nitras; but, I imagine, with the added advantage of a serous discharge. This subject will be continued.

* She has since entirely recovered.—Feb. 27th.

CASES OF DROPSICAL OVARIA

REMOVED BY THE LARGE ABDOMINAL SECTION.

By D. Henry Walne, Surgeon.

[Continued from p. 690.]

(For the Medical Gazette.)

Fourth Case.

In the month of August last I was requested to visit Miss N——, a lady residing a few miles from Kingston, who was considered to be the subject of ovarian dropsy, attended by rather unusual circumstances; and on the 30th of that month, met one of two intelligent surgeons, the benefit of whose joint advice she generally enjoyed. She had been tapped a few days before, and had also several times previously undergone the same operation, and at one time was relieved of her complaint in a very remarkable degree for several months, under circumstances which led to the belief that a cyst had given way spontaneously, and its contents been taken up by the peritoneal absorbents. The night before I visited her the puncture made by the trocar at the last tapping had opened, and yielded a quantity of fluid, of which full six pints were collected and shewn me. Twenty-five had been drawn off by the operation. Nothwithstanding the reduction of her size thus occasioned, the abdomen remained much distended, with distinct fluctuation high up when she was in a sitting or, at most, only a half reclining posture. There was also considerable hardness, chiefly towards the left side, and moveable; and on further investigation I found the true pelvis occupied with a very solid body, the os uteri being situated very forward towards the symphysis pubis. The recent tapping having been performed in the linea alba, and the relief afforded by it being so very incomplete, notwithstanding the bulk of fluid discharged both at and after the operation, I suggested the use of the trocar at another point, above and to the left of the umbilicus, where the fluctuation was very lively, and the

abdomen very prominent; and as the case was complicated, it was agreed that I should renew my visit a few days after this farther proceeding should have been adopted.

In a day or two eighteen pints of fluid were removed by tapping at the spot indicated, and on the 7th of September I again visited her, having the pleasure of meeting both her medical friends. Though more relieved than before, I still found fluid in abundance, and there was much reason to think that ascites was combined with a large encysted dropsy, or that two enormous cysts of the same ovarium existed simultaneously. Some œdema of the lower limbs was apparent at my first visit, but was much less at the period of my second. She had meanwhile taken no active diuretics nor purgatives; the chief object with which we had prescribed being to secure comfortable sleep, and gentle action of the bowels, which were sluggish; the rectum being, I believe, impeded in its natural action by the pressure of the tumor in the pelvis; and having even, when distended, pushed forward the vagina and caused a prolapsus of that part.

Being now much lighter and more equal to the journey, she came to London for the benefit of Dr. Blundell's opinion, she having a very earnest wish to undergo an operation, which I could by no means counsel her doing. Dr. B. and myself, after a carefully renewed inquiry, agreed that her's was not a desirable case for operation, and she was sent back to the country regretting our decision.

On the 3d of October she was again tapped, and by no means before that measure had become imperatively necessary; about fifty pints of fluid being this time withdrawn, from the situation of the earlier tappings; viz. the linea alba below the umbilicus. She had now heard of my third operation, and its success so increased her desire to undergo the same at any hazard, that she entreated her friends to make the requisite arrangements for again consulting Dr. B. and myself in town, and if we would consent, to place her at once in lodgings in London, that no time might be lost; convinced as she was (not, however, more completely than were the medical men, one and all, who saw the progress of the case), that a few weeks most probably, a few months with moral certainty, would terminate her existence, were the disease permitted its unrestrained course. The decision of the question rested much with me, and, as I think, properly in part also upon her own intelligent and reasonable judgment in the matter; the more than ordinary danger, and the proportionately diminished probabilities of life, in her case, being placed before her most unreservedly. She was quite decided. An educated, clear-minded, calm-thinking patient of 45 years of age, in the perfect possession of her faculties, and having evidently well weighed the alternatives, is entitled to be listened to when the certainty of a short period of existence in wretchedness on the one hand, and on the other the chance of being cured of a formidable disease with a prolongation of life in a more comfortable state presents itself, even at some, possibly great risk of its immediate loss. "To deny her wish was to condemn her to die, and not only so, but to be a very miserable sufferer till she did die, which must be shortly," was her own mode of expressing the estimate in which she held my reluctance to operate; and the formidable rapidity of her disease in its progress justified her view of the subject. I could take no other myself; and I therefore determined to operate; in which determination her own medical men acquiesced. as did Dr. Blundell, and were all generously willing to take any share of the responsibility that was reasonable. My patient was disposed to take it all upon herself. If she had recovered, I could not have denied that she owed her life to her own calm intelligent, mild determined courage. But, professionally, I am responsible for the decision; and if blame attaches to it, desire that it may be mine alone. Her state when this decision was arrived at requires to be described.

In about a fortnight from the last tapping she had nearly regained the size acquired before its performance, She measured in circumference 49¾ inches: from scrob. cord. to pubes 28 inches.

Her general health, with the exception of great feebleness and emaciation, both rapidly increasing, rather good. Tongue clean; appetite good; pulse calm, and of moderate

frequency, soft and very feeble. She had recovered to the greatest degree that could be expected after the tapping, and in a few days more the distress of distension would assuredly destroy appetite and rest, and the partial respite of comparative ease which that operation afforded.

Oct. 19th.—The arrangements being made, much as in my second and third cases, and the skin marked, in stripes crossing the intended line of wound, with a solution of black sealing wax in spirit of wine*, Dr. Blundell, Messrs. Vincent, Law, and Beale, and her medical advisers Messrs. Holberton and Hollier, were placed to the best advantage to counsel and assist in the complicated circumstances which had to be encountered. The patient was seated, and half reclining, her feet firmly planted apart upon the ground, and an ample receptacle placed between them for the fluid that would be discharged. An incision of two inches, in the integuments, &c. in the linea alba, below the umbilicus, was made down to the peritoneum, which was then punctured with the scalpel, and an opening made in it large enough to admit a finger. Ascitic fluid flowed abundantly. I now passed a finger into the cavity of the abdomen, to ascertain with certainty the condition of matters, and found an ovarian tumor freely moving in a vast collection of ascitic fluid. As the abdominal parietes became somewhat less tense, the situation of its fundus could be estimated; and before they should become too flaccid, I requested Dr. Blundell to pass a finger into the opening, confirm my judgment as to the state of the ovarian tumor, and stop the flow of fluid till I should have completed the division of the external textures to the required extent for effecting its easy extraction. About fifteen inches of the much attenuated and stretched skin was thus divided. Then the fluid being permitted again to flow was chiefly discharged, and the section of the inner textures completed also, in the manner of my former operations. The tumor came readily forward. The pedicle, formed by the left broad ligament of the uterus, was pierced by an armed needle and tied in halves, and then divided between the ligatures and the tumor. When the latter had been removed, it was my next object to ascertain the character of the hard body which occupied the pelvis. If it had proved a diseased ovary, I should have removed it; as it was found, on drawing it up from its situation, to be an indolent fibrous tumor of the uterus, though of great size, it was permitted to remain, and did not sink again into the pelvis, where, indeed, it had already been productive of serious inconvenience from its bulk, nearly that of a full-grown fœtus. The other ovary was found to be healthy. It now only remained to close the wound carefully, which was done with eighteen stitches, lint on each side of it, plaister crossing but not touching the wound, and a bandage; all as in my former cases.

Five gallons of ascitic fluid had been collected, and a tumor removed of 14 lbs. weight, nearly five of which were solid matter, the rest a gelatinous semi-fluid, of various degrees of tenacity, and contained in cysts of various sizes. Here and there, also, a moderate sized cheesy nodule was visible or prominent upon its surface; and at the lower end of the flattened ovate body, an appearance denoting the rupture of a former cyst was very evident. Through the remains of a straight rent the principal cyst protruded, in a rounded form, partly overlapped by the edges of the rent, which edges were separated in turn by the bulging cyst. The patient, having borne the operation well, was placed in bed. Towards its conclusion, a little brandy had been given her, and subsequently an anodyne of Morphiæ Acetat. gr. $\frac{1}{4}$ in Mist. Camph. $\overline{3}$iss., which was to be repeated in an hour.

The operation was completed about five o'clock. At six, vomiting occurred. Half a wine-glassful of brandy was given her. Pulse 91 shortly after. The second dose of the anodyne, given at 7 o'clock, was brought up immediately; a third was given at eight, and she did not vomit again till ten o'clock. At this hour the skin was

* This answers the purpose more pleasantly than a solution of Argent. Nitr. since it can be applied a few minutes, or longer, before the operation, as may be most convenient; and it causes no irritation. The marks are very conspicuous.

A French translator of my cases has mistaken the direction of these lines, supposing them to be intended as a guide for the knife in making the incision, and to be made in its course. They cross that line, and shew the correspondence of the divided parts when about to be fixed in apposition by sutures.

warm and moist, and no shivering nor chilliness had occurred. Her mind was clear and cheerful, but she had not slept. Aching pain at the lower part of the abdomen, and in the back, were complained of; but no smarting of the wound, nor any sense of tightness, was felt. Urine, by catheter, ℥iij.: pulse 96: tongue less moist than natural, but no thirst. Has taken nothing but her medicine. She is restless. Temp. 72.

Extr. Hyosc. gr. v.; Morp. Acetat. gr. ss. statim s. A pint of plain water allowed for the night.

One of her medical friends, Mr. Hollier, accustomed to see her on such occasions, and now present, says she has suffered more after tapping, within the same time. This gentleman was continually in friendly attendance; and after conferring with Dr. Blundell and myself, remained with her all night.

20th, 8 A.M.—Before the pills were procured last night she fell asleep at about 11, and slept a full hour, at the end of which time the pulse had fallen to 86. The pills were given, though she felt she should sleep. After this she dozed chiefly till 1 o'clock, and was then sick; slept comfortably three hours and a half, and on waking observed she felt "so much better." An hour and a half of watchfulness was followed by two hours more sleep. Skin warm, and freely perspiring: tongue moist, but a little brown, as from opiates: some thirst, but has taken only half a pint of water: pulse at present 100, soft, and fuller than before the operation: no shivering nor chilliness: no headache nor confusion of mind has occurred. Her sleep was "very comfortable." Her pain subsided by degrees, and she has now no uneasiness but from the feeling that the bladder requires to be relieved. Is, in fact, "delightfully comfortable," to use her own expression. Urine withdrawn, ℥viij., of high colour. A little air occasionally rises; but she has not vomited since 1 o'clock. Temperature, 71°.

At mid-day the symptoms were in most respects so much the same that it is not necessary to record them. She had slept the greater part of the time, and had some uneasiness in the lower part of the abdomen, and in her back. Pulse 107. No tenderness of the abdomen. Urine drawn off, ℥iij.: this afterwards done at proper intervals.

5 P.M.—As before. Occasional eructation of air and a little bitter-tasting fluid.

10 P.M.—Has just vomited near half a pint of green acid fluid, and still feels sick, as she has done in the evening. She is also teazed with flatus and occasional griping: rectum-tube used to no purpose. Pulse 112: skin warm and perspiring: no headache, shivering, chilliness, nor hiccup. Soda-water, with a little brandy, given.

℞ Morph. Acet. gr. ss.; Extr. Hyosc. gr. ij. in pil. stat. s. Sumat. etiam Mist. Camph. ℥iss.

21st, 8 A.M.—Passed a tranquil night, with more than four hours of sound sleep, and repeated dozings. Vomiting has not returned: flatus moves noisily in the intestines: skin very warm, and rather profusely perspiring; and a little roughness, like a papular eruption, is felt on some parts of the chest. Pulse 113, soft and feeble. No headache: mind clear and cheerful. Enjoys the soda-water, and once had two tea-spoonfuls of brandy with it. Tongue almost clean and not dry. Urine spontaneously voided, ℥viij. at 8 o'clock without difficulty or sensible effort. The œdema of the legs is much reduced. She has no tenderness of the abdomen, nor pain in the back. Feels a little disposed to bilious eructation. To have a tea-cupful of beef-tea with salt in it. Temperature, 71°.

2 P.M.—She was sound asleep when I called. Beef-tea and soda-water had been taken, and no sickness had occurred. ℥vj. of urine had been voided. I postponed seeing her, on receiving this report, till 5 P.M. and then found that she had slept several hours very soundly. The flatulency had scarcely troubled her since she took the beef-tea. It is now 48 hours from the time of the operation, and she has in all taken not more than a quart of water, two bottles of soda-water, and about ℥vj. of beef-tea. Pulse 105, firmer: skin temperate and moist. She is less warmly covered, and has perspired less. Tongue moist, and, for the most part, clean: urine passed, ℥vj. Has slight headache, perhaps from being suddenly awakened. Nothing else to complain of.

10 P.M.—Visited by Dr. Blundell as well as myself. Pulse 102, full, and moderately firm. Has had another cup of beef-tea, and soda-water occasionally. No fresh symptom to note.

℞ Extr. Hyoscyam. gr. v.; Morphiæ Acetat. gr. ss. in pil. ij. h. s. s.

22d, 9 A.M.—Had repeated intervals of sleep in the night, but was disturbed by irritation of the skin. Took beef-tea and soda-water, and this morning some tea and a sopped Norwich biscuit: the first solid food yet taken. Complains of heat and a papular eruption. The day very close. Temperature 74°. Pulse 97, full and soft. No discomfort of bowels, nor any movement of them. The bed-clothes to be lightened, her linen changed, and the temperature of the room gradually lowered.

5 P.M.—The changing of linen, &c. fatigued her, but she is now very comfortable. A jelly was given, and some beef-tea. Pulse 93, full, and firmer than before; Mr. Hollier says, "better than it has been for five months." Urine ℥viij. When we remarked on its scantiness, she observed that so much in a whole day was more than usual with her of late. Tongue clean and moist. Nothing to complain of.

10 P.M.—As before. Pulse 95.

Rep. Pilul.

23d, 9 A.M.—Pulse 92. Had a good night. No change to note. Takes beef-tea, calfs'-foot jelly, and biscuit, all in moderation.

2 P.M.—Wound dressed (93 hours from the operation): all the stitches removed: it appears to be substantially united: a few little irregularities of the edges, from the puckering of the redundant but shrinking skin. Lint laid along it, and plaister over this from side to side of the abdomen.

10 P.M.—Several of her friends have visited her to-day, including Mr. Holberton, her other medical friend from the country, who is much pleased with her state. She complains of smarting in the wound, and has been teazed with flatus. Pulse 102. No movement of the bowels hitherto. An enema given of two pints of warm water: it brought away a copious motion, which afforded great relief.

Rep. Pilul.

24th, 9½ A.M.—She remained comfortable last night after my visit, and slept several hours. At 5 A.M. took some beef-tea, and then slept till 9, when she took her breakfast of tea and toast. Says she is now comfortable, and free from smarting or other uneasiness. Pulse 100 just after breakfast.

5 P.M.—Pulse 95. Has taken beef tea and jelly. Has been rather teazed with flatulency. When she turns in bed the wound smarts. Its lower end yields a little thick healthy pus. Tongue drier to-day, and a little furred.

10 P.M.—Dr. Blundell met me. Pulse 90, fuller again, and firmer. The colon is much distended with flatus. No motion. Tongue cleaner, and more moist. Does not complain of anything material.

Enema Aquæ tepid.

25th, 9 A.M.—Had three motions from the enema, with much fæculent matter, as well as abundance of flatus. Her night was rather disturbed, and flatulence still inconveniences her. Pulse 88. Skin moist and warm. Has taken an egg and toast, with tea, for breakfast.

℞ Spir. Ammon. Ar. ℥ss.; Mist. Camph. ℥iss.; M. ft. haust. pro re nata sumend.

5 P.M.—Pulse 92. In other respects as before.

10 P.M.—Seen by Dr. Blundell also. Has been troubled with flatulency throughout the day, and does not seem quite so well as yesterday. Pulse rather more frequent: skin warm and moist: no motion: urine not deficient: has taken chicken, and some beef-tea, and soda-water with a little brandy added, once or twice. Tongue drier, and somewhat furred. Wound dressed. Healthy pus is furnished along that part which is not already healed, and there is a blush of the skin at its edges. Lint laid along it, supporting-plaisters across the abdomen lightly applied. The healing power seems deficient, which, recollecting her extreme feebleness before the operation, is not to be wondered at.

℞ Decoct. Cinchon. ℥ij.; Spir. Ammon. Ar. ℥ss.; M. ft. haust. ter quotidie sumend.

℞ Extr. Hyoscyam. gr. vj.; Aloes Barbad. gr. ij.; Ol. Carui, gt. ij.; M. ft. Pil. ij.; h. s. sumend.

26th, 1 P.M.—Passed an indifferent night, being annoyed with flatulency and distension of the intestines. Has had three motions, one copious and fæculent, two liquid, with much flatus. Pulse 90. The rectum-tube used with little effect. No sickness. Is thirsty. Tongue dry and brownish. Thinks the dressings too tight, which they may be from distension that has taken place

since they were applied. I loosened the ends of the plaister on one side, and Mr. Hollier did so on the other after I had left her.

10 P.M.—Is rather better. Tongue furred, and white at the back; moist and clean towards the tip; it is much less dry on the whole, and her thirst is less. Urine not deficient, but of higher colour. Pulse 96, and soft.

℞ Extr. Hyoscyam. gr. v. in pil. ij. h. s. s.

27th, 2 P.M.—Had a good night. Tongue cleaner. Is less flatulent. Has taken nourishment less frequently, and feels the better for the change; but enjoyed her breakfast of an egg, toast, and tea, and had a mutton chop, with a little brandy and water, for dinner. Pulse 98, full and firm. No sickness, headache, nor pain of any kind, except a little occasional griping before the bowels move. Is in better spirits. Wound dressed. Healthy suppuration along it. It is more closed at a point where, from the puncture made in the last tapping, the skin was less healthy, and did not unite at first so well as elsewhere. The upper part, however, where it was dry and apparently soundly healed some days ago, now furnishes matter, and the thread-holes have opened afresh in several places with an unhealthy pustule at each. The skin of the abdomen, at a distance from the wound, has also festered under the plaisters. The blush in the line of wound has much disappeared. Dry lint laid along it, and other dressings as before.

10 P.M.—Has been more comfortable all day, except from 4 to 5 o'clock, after turning on her right side rather hastily. She then was in pain, but became easier when again lying on her back. Has slept this evening. Bowels again moved. Pulse 98, having just taken some beef-tea. The Decoct. Cinchon. &c. seem to agree, and have been taken regularly. Tongue improved. Urine ℥xij. since the morning, besides what passed at the time the bowels were relieved.

Rep. Pil. e Hyoscyam.

After I left her she was so very comfortable that she wished her kind friends, Mr. and Mrs. Hollier, both to go to bed, which hitherto they had never done at the same time, one of them being always in close attendance upon her. A careful and attached servant remained in charge of her, and at about 5 in the morning, thinking her mistress not so well, called Mr. H. to see her. He found her very uneasy, suffering from flatulent distension, and pain in the upper part of the abdomen on the right side. She had been sick, and her pulse was from 114 to 120. Mr. H. gave her some soda-water with a little brandy in it, and then an anodyne. He saw her again, and found her pulse much more frequent, at 8 o'clock of the

28th.—I was fetched to her immediately. Most alarming symptoms had come on. The pulse much exceeded 140, and was small as a thread, and so feeble as to be scarcely felt with sufficient distinctness to be numbered accurately. She vomited constantly. Her feet and hands had lost their natural warmth, though the room was of good temperature. They had begun to acquire lividity. A perspiration of a clammy character covered the skin, and she moaned with distress, complaining of uneasiness in the right side and across the abdomen, and of great distension. Her mind was still calm. Anodynes were administered; hot applications to the extremities and stimulants used. It was quite evident that she had but few hours to live. She struggled through the day beyond expectation, and died at 8 in the evening.

On the following evening, Dr. Blundell, Messrs. Hollier, Beale, Law, and myself, examined the abdomen. The external appearance of the wound evinced in a remarkable manner the deficiency of reparative power with which we had been contending. Many of the points of skin where the suture-threads had penetrated were open, as if they had been recent punctures in a piece of softened parchment. At that part where the operation of tapping had been last performed, and where the skin, at the time I made my incision, was still slightly red, and a little elevated, there was an opening of the size of a large quill. A quantity, perhaps half a gallon, of serous fluid had escaped at this opening on the body being moved before we arrived, and there was now a ready communication between the air and the peritoneal cavity. The part had probably been but slightly agglutinated, or the connection previously established had been again nearly dissolved by suppurative

process within the last few days, at the time when the other parts of the wound seemed to retrograde. Where the ligatures hung forth, the lips of the wound were also apart, but this was less remarkable, their presence being considered. Here, however, they were not so surrounded with adhesive deposit or sprouting granulations as is usual at such a period when the healing powers are undiminished.

An incision was now made two inches to the left of, and parallel to the wound, but longer at each end; then transverse sections towards the right side from both ends of the first cut, and a long flap of the parietes of the abdomen turned back, so as to exhibit without disturbing the interior of the peritoneum, where it had been divided in the operation. Nothing could exceed the beautiful perfection of the internal repair which had been effected throughout a very large portion of the entire wound. From its extreme upper point down to the quill-sized opening above described, the peritoneum was so completely and smoothly united, cut edge to cut edge, without a single attachment to any subjacent viscus or any apparent diminution of its natural smoothness and moist polish, that at first it required close inspection, and a comparison of situation with that of the wound in the external parts, to give us assurance of the exact position the division had occupied. Below the quill-sized opening, near which some long and firm adhesions to the intestines had been formed, we again observed the same complete union of the lately divided peritoneum, extending downwards till it reached a part where the peritoneum and other textures of the abdominal parietes had lain upon the rounded surface of the indolent uterine tumor described in the operation. There a different state of things was observable. For nearly three inches just where, whether the minor or the major operation be performed the peritoneum is equally divided, its wounded edges in two regularly curved lines, half an inch at least asunder at their greatest distance, had been mechanically kept from uniting by the presence of the tumor which nestled between them. Here attempts at adhesion had been in vain made. Suppuration had been substituted. The fore-part of the tumor itself was injected; matter and much lymph lay upon its surface; its right side most red from recent inflammation; its left exhibiting more pus, lying beside the ligatures, and a collection of some spoonfuls accumulated near the tied broad ligament, enclosed, however, by adhesive deposit which preserved it from diffusion within the peritoneum. This membrane itself, chiefly on the right and very partially, had also been the seat of recent inflammation; some thin films of plastic deposit lay upon its surface, and towards the right hypochondrium, as broad as the palm of a man's hand, it was reddened by injected vessels. At the middle and left side of the abdomen scarcely any trace of the kind was observable. A small quantity of a reddish serum, quite clear, was found in its cavity, doubtless of the same character as that which had escaped before we opened it.

The viscera generally were healthy; the intestines distended with air and of a dark marbled greyish purple hue, except where the redness was observable. The uterus was elongated and flabby, its back and fundus occupied by the large fibrous tumor of the ordinary character of that structure, and the front wall by a smaller tumor of the same description, about the size of a French walnut.

The attention of my readers will, I hope, be arrested by a few of the particulars of this case and post-mortem examination, but I may be permitted briefly to direct it to some of the circumstances which are of most interest, lest they should engage it less than from their practical value is desirable.

First. How important is the reparative power to the safety of the patient in peritoneal wounds, and how necessary, therefore, that operations for ovarian disease should be performed before the constitution has been exhausted by repeated tappings, which, becoming more and more frequently necessary as we continue to resort to them, drain the system of its vigour with increasing rapidity. The surprising amount of ascitic fluid, five gallons, formed in less than three weeks between the last tapping and the day of operation, must have diverted nearly all nutrition from its proper course. When the fluid forms rapidly within a cyst the observation equally applies. Feeble, however, and little sustained as was the healing process, there can be little doubt that the patient would have recovered but for the presence of the

hard tumor, and its interference with the closure of the recently wounded parts; and I believe that could the operation have been performed some months sooner she would have recovered in spite of that disadvantageous circumstance.

Secondly. How perfect is the restoration of the free covering of the viscera, the parietal peritoneum, even when the power of repair is feeble, provided the adjustment of the wound be carefully completed, and remain undisturbed. How important, therefore, are the practical measures directed to this end; measures which are passed by as "simple" by the great majority of those who do not hesitate to put forward their opinions as to the advisability of such operations, whilst they are content at the same time to be ignorant of what may make them safe and proper.

Thirdly. The upper portion of the wound would seem not to have been at all a source of danger in the case: shewing with what propriety the attenuated abdominal parietes may be extensively divided to effect the easy removal of diseased ovaria when any doubt exists as to the very simple, unadherent character of the disease. In this instance the tumor might as well have been almost entirely solid for any facility which reducing its size could afford. The largest cyst may have contained a quart of fluid, or even a little more, but the other cysts were small, very numerous, and having thick walls must have been withdrawn through a considerable opening.

In conclusion I may observe, that so far from seeing in the foregoing history any circumstance calculated to discourage me in the performance of operations for the removal of diseased ovaria, I draw from its consideration additional assurance of their safety and of their value; safety when timely performed, value in preventing the occurrence of such complicated accumulation of misery, and in preserving lives which the diseases they combat would otherwise destroy. I trust many practitioners will, upon the perusal of the narrative, readily acquiesce in my own estimate of the matter, when I conscientiously declare that nothing has yet occurred in my practice to shake my confidence in such resources of our art.

Guilford Street, Russell Square,
London, January 14, 1844.

CONTRIBUTIONS TO PATHOLOGY.

By John Percy, M.D. Edin.

Physician to Queen's Hospital, and Professor of Organic Chemistry, Queen's College, Birmingham.

(For the London Medical Gazette.)

Bright's Disease, with Analysis of the Urine.—Examination of the Blood and Brain for the presence of Urea.—Note on the Constitution of Nitrate of Urea.

March 24th, 1843.—John Kirwan, admitted in-patient of the Queen's Hospital, æt. 47. Of robust frame. Coach-smith. Of very intemperate habits, having for many years drunk freely of spirits. Three years ago, was confined to his bed with rheumatism during three weeks. Has since been liable to attacks of pain in the chest, accompanied with dyspnœa and palpitation. Six weeks ago, he first observed swelling of his feet and ankles. His body is now generally anasarcous; his face and eyelids especially are swelled and puffy in the morning. Distension and fluctuation of abdomen. Penis and scrotum much distended with liquid. Distinct bruit accompanies the first sound of the heart; loudest over the sternum below the second rib; indistinct, and occasionally absent, at the apex; heard, also, in the course of the carotids. No pulsation of external jugulars. Percussion natural. Sonorous râles in anterior part of chest. Appetite good. Tongue flabby, coated yellow in the centre. Bowels reported regular. Pulse 100, compressible. During the last six weeks, he has been obliged to rise two or three times in the night to pass urine. There is a hard, defined, pulsating tumor, of the size of an orange, in the right popliteal space. Loud bruit is heard on applying the stethoscope to this tumor, which was first perceived six years ago, the patient, at that time, having been struck with a piece of iron on the right popliteal space whilst engaged in tireing a wheel. He has suffered no inconvenience from it. Before admission, he has taken mercury, as is evident from the fœtor of his breath.

The patient continued under my care in the hospital until his death, which occurred in September. The urine contained albumen. An examination of this excretion is subjoined. Hydragogue cathartics, such as elaterium, jalap, and gamboge, were prescribed with temporary benefit. The diuretic treatment was also tried, and with the same result. During the progress of his illness, symptoms of congestive apoplexy supervened, and required active treatment by cupping and vene-

section. I shall introduce only occasional extracts from my journal.

April 1st.—Bowels have been freely moved; watery stools. Anasarca generally diminished. Pills (Elaterium, gr. $\frac{1}{6}$ in each pill, with Hyoscyamus) occasioned sickness and vomiting. Pulse 100, regular, of moderate strength. Tongue indented by the teeth, on each side coated, clean along a stripe in the centre, and at the edges. Frontal headache. Last night rose twice to pass urine, and four times in the previous night.

May 13th. — Anasarca much increased. Took two elaterium pills yesterday, which produced three watery stools. Great tendency to drowsiness.

Cuc. Cr. Nucha.

15th.—Considerably relieved by the cupping. Passed urine twice last night.

20th.—Yesterday had Cambogiæ gr. iij. c. Potassæ Bitart. ℈j. An hour afterwards had a copious watery motion. Bowels have been moved four times since. The gambogepowder did not induce sickness. Cupping at the nape of the neck to f℥iv. was repeated yesterday, and was followed by great relief of the head symptoms. Distension and fluctuation of abdomen. Passed urine three times last night. Tongue moist, pale, and smooth.

24th.—Symptoms as before. Head continues relieved. Much complaint of pain across the loins, but there is no tenderness on pressure in this situation. Leucophlegmatic countenance. Distinct bruit with the first found of heart.

27th.—Abdomen extremely distended, and tense. A diuretic mixture, containing Tr. Digitalis, Sp. Æth. Nitrici, and Acet. Potassæ, was prescribed. A solution of Bitartrate of Potass and Biborate of Soda for common drink.

11 P.M.—Orthopnœa. Violent sickness, and pain in right iliac region.

V. S. ad ℥vj. Effervescing mixture containing Carbonate of Ammonia, Tartaric Acid, and Liquor Opii Sedad.

28th.—Slept well. Feels better. Abdomen not so tense or painful.

June 8th.—A discharge from the right ear. In other respects as before.

14th.—Cough, with muco-purulent expectoration. Sonorous râle. Dyspnœa last night. Inflammation of conjunctiva of right eye.

21st.—Face extremely œdematous. Occasional dyspnœa. Restless night. No vertigo. No return of nausea. Pain referred to lower part of abdomen. No complaint of pain across the loins.

July 1st.—June 28th, f℥vj. of blood taken by cupping at the nape. Relief. Occasional dyspnœa. Sleeps much. Anasarca to a great extent. Passes urine three or four times daily.

16th.—Much worse of late. This morning, wandering delirium. Thinks he has been hung. Red blush in several places on the lower extremities. Scrotum and penis much distended with liquid. Pulse regular, firm.

19th.—I saw him last night. He complained of being tormented with spectres, some of which had no heads. Discharge from both legs in several places. Bruit with the first sound still distinct. Occasionally he appears to be much exhausted. Has taken constantly an æthereal mixture which was prescribed before.

Aug. 30th.—During the last several weeks he has continued considerably improved. The places from which liquid had escaped were progressing towards healing. Liquid, however, is now discharged from them. Ascites continues. Anasarca greatly diminished. Cough, with expectoration; "cannot get up his phlegm." Lies most easily on the right side. Aspect of countenance leuco-phlegmatic, having a yellowish-white tinge, expressive of anæmia.

Sept. 9th.—The sores from which the serous liquid has been long draining are now almost entirely healed, with the exception of one or two spots on the inner part of the right thigh. Œdema of face considerably increased.

He died comatose Sept. 15th.

Autopsy. — *Head :* — Brain somewhat softened.

Chest :—Clear dark-coloured serous liquid in both pleural cavities, largest quantity in the right. No adhesions. No evidence of disease in either lung. *Heart :*—Nearly four ounces of clear yellow liquid in the pericardium. Recent and slender adhesions. Weight of heart, with the vessels, 1 lb. 1 oz. (avoirdupois). No coagula. Aorta dilated at its origin. Internal surface rough. All the valves without deposit, normal.

Abdomen :—Peritoneal cavity contained about eight quarts of clear liquid. Shreds of lymph about the umbilicus. *Stomach :*—Small and contracted; coats veay thick. *Small intestines* contracted. *Liver :*—Weight, $4\frac{1}{2}$ lbs. (avoird.) Peritoneal surface opaque, and thickened in places. *Kidneys :* Weight of right 5 oz. (avoird.); of left, $4\frac{1}{2}$. Distinct appearance of granular degeneration on the surface, deprived of fibrous coat, and internally.

The tumor in the popliteal space was found, as expected, to be a true aneurism, of the size of a small orange.

Examination of the urine.

March 25th.—Urine passed this morning; very pale; not clear, even after standing; mucous cloud; filters bright; reddens litmus; frothy by agitation; sp. gr. 1016°; temp.

61° Fah.; abundantly coagulated by heat and nitric acid. I boiled some of the urine for several minutes; filtered perfectly bright; no further coagulation by addition of nitric acid to filtered liquid. I proceeded to make an analysis; but, unfortunately, an accident occurred in the determination of the urea, which, however, only existed in small quantity. 1,000 grains contained, of—

Water	964·92
Albumen	9·78
Fixed saline matter . .	8·80

The whole amount of solid matter being 35·08, we have, by deducting from this quantity the sum of the albumen and fixed saline matter (18·58), 16·50 of urea and indeterminate organic matter. The evaporation was effected, first over the ordinary steam bath, and then in Berzelius' apparatus. The fixed saline matter contained alkaline carbonate, the aqueous solution restoring the colour of reddened litmus. I found also earthy phosphate, alkaline chloride, and sulphate; but I did not search for alkaline phosphate.

May 16th.—Urine passed yesterday; pale brown; sp. gr. 1020°; turbid, and slightly so after filtration; abundant coagulation by heat, and also by nitric acid; filters perfectly bright after boiling; no turbidity produced by nitric acid in the filtered liquid; strongly acid; I was not able to detect globules by the aid of the microscope. In this analysis I operated, as usual, upon three portions, of 500·0 grains each. The drying was effected in Berzelius' apparatus, at 212° Fah. 500 grains left 26·59 of dry residuum. The albumen was determined by washing the dry residuum, first with alcohol of 0·834, and then with distilled water, until the solution ceased to be affected by nitrate of silver. By the ordinary process I obtained 7·86 grains of nitrate of urea, which (estimating the salt as $(C_2 N, O + NH_3 + HO) + NO_5 + HO = 123·912$) corresponds to 3·84 of pure urea.

Analysis of 1,000 *grains.*

Water	946·82
Albumen*	22·64
Urea	7·68
Uric† acid and indeterminate organic matter	17·52
Fixed salts soluble in water . .	5·20
Chlorine, sulphuric, phosphoric, and carbonic acids . . .	
Potass and soda	
Earthy phosphate . . .	0·14
	1000·00

On the addition of distilled water to the incinerated residuum, in numerous spots where the little masses of ash were detached by the water, the platinum had a blue colour. The solution was strongly alkaline, immediately restoring the colour of reddened litmus. Phosphoric acid was abundant; and copious precipitation was occasioned by the addition of bichloride of platinum. The proportion of earthy phosphate, it will be observed, was small.

Sept. 15th.—Urine last passed. Colour pale brown; sp. gr. 1015°; temp. 70° Fah.; turbid, and continues so after filtration; extremely offensive and ammoniacal; an abundance of minute prismatic crystals of ammoniaco-magnesian phosphate; flocculi separated by heat, insoluble by the aid of nitric acid. A portion was evaporated and incinerated, and the incineration was aided by nitrate of ammonia. The aqueous solution of the residuum instantly restored the coloured of reddened litmus. Only a trace of chlorine was detected by the addition of nitrate of silver and nitric acid.

Tables of the specific gravity of the urine. In the second table is indicated the specific gravity of the urine passed during the night.

Date.	Morning.	Noon.	Night.
March.			
25	1015		
26	1016	1018	1017
27	1016	1016	1020
28	1016	1017	1018
29			1020

Date.	Sp. grav.	Date.	Sp. grav.
March 30	1015	May 10	1018
April 20	1037	12	1015
21	1030	13	1016
22	1016	14	1017
23	1014	16	1015
26	1014	17	1018
27	1013	18	1016
28	1018	19	1019
29	1016	20	1019
30	1018	22	1019
May 1	1016	23	1019
2	1015	25	1008
3	1017	27	1010
4	1016	29	1015
5	1015	30	1016
7	1014	31	1016
8	1015	June 1	1013
9	1016	3	1015

Examination of the blood, with a view to the detection of urea.

May 19th.—I took 400·0 grains of the

* Ash deducted.

† Small crystals of uric acid were separated by addition of acetic acid.

serum of Kirwan's blood, obtained by cupping at the nape this morning. I evaporated to dryness over the steam bath; the residuum was twice treated with distilled water at a gentle heat; the aqueous solution was decanted, and evaporated to dryness; the residuum was twice treated with alcohol, sp. gr. 0·834; the alcoholic solution was filtered, and evaporated to dryness; to what remained was added a small quantity of water, and then nitric acid.

22d.—I observed a minute quantity of precipitate, in which, however, I could not, by the aid of the microscope, detect any crystals of definite form; the result must, therefore, be considered negative.

Examination of the brain, with a view to the detection of urea.

Jan. 20th, 1844.—Having left a portion of Kirwan's brain, well broken up, in alcohol since the period of his death to the present time, I proceeded to search for urea. Filtered alcoholic solution; filtered liquid became slightly turbid. I evaporated first in the chloride of calcium bath, and then, at a gentle temperature, on the sand bath. Oily matter separated as the evaporation proceeded. Added water to the residuum; filtered; evaporated filtered solution; and, to residuum added nitric acid of sp. gr. 1·2 in excess.

24th.—No trace of crystallization of nitrate of urea. In this case, also, the result is negative.

Note on the constitution of nitrate of urea.

I may here appropriately append a note on the constitution of nitrate of urea. It will be observed that I have estimated the salt as containing an equivalent of water, according to Regnault's experiment, which I am persuaded is correct; and in proof of which I introduce an analysis of my own.

I took 34·04 grains of pure nitrate of urea, reduced to fine powder, and dried during several days consecutively in Berzelius' apparatus at 212°, but without desiccation of the air by chloride of calcium. I dissolved the nitrate in distilled water, and cautiously added pure carbonate of baryta in excess. The nitrate of baryta was decomposed by an excess of sulphuric acid, and the weight of sulphate of baryta was accurately determined. From this I could deduce the weight of nitric acid existing in combination with the urea, and could consequently deduce also the weight of urea. I obtained 31·974 of Ba, SO_3. Admitting urea to be $C_2N, O + NH_3 + HO$, C = 6·125, N = 14·186, O = 8·013, H = 1, Ba = 76·676, and SO_3 = 40·159 (on the authority of Berzelius, vide Traité de Chimie, t. 5ième), we have

Ba, SO_3	=	31·974
Ba	=	20·983
NO_5	=	14·846
Urea	=	16·596
Water	=	2·598

For, 34·04 − (14·846 + 16·596) = 2·598

Per cent	
Urea . . .	48·754
Nitric acid . .	43·613
Water . .	7·632
	99·999

Regnault's analysis (Becquerel, Semeiotique des Urines, p. 33—)

Urea	48·938
Nitric acid . . .	43·781
Water	7·281
	100·000

Calculated	
Urea	48·945
Nitric acid . . .	43·781
Water	7·273
	99·999

It is evident that the nitrate of urea which I employed was not perfectly deprived of hygroscopic water; for the excess of water, as shewn by the calculated analysis, amounts to 0·359 per cent.

Observations.—The case which is here detailed does not present any remarkable feature of interest, affording only an ordinary illustration of the course of Bright's disease, or granular degeneration of the kidneys. The predisposing cause may be clearly traced to the excessive use of ardent spirits, as it appears to be well ascertained that habitual intemperance is frequently followed by the disease in question. The evacuation of serous liquid by spontaneous openings in the skin in several parts of the body was attended by obvious temporary relief. I expected that diffuse cellular inflammation would be the consequence, and was surprised to observe that these openings, notwithstanding the constant drain from them during a considerable period, were at length nearly all healed. We should be cautious in inferring from a case of this kind the propriety of removing the anasarca by artificial scarification, as fatal effects have been speedily induced by such practice, death being occasioned by exhaustion consequent on diffuse cellular inflammation. I have myself witnessed fatal cases of this kind. It has been sug-

gested, if I mistake not, by Dr. Budd of King's College, that the urea existing in the serous liquid may, probably, by virtue of its irritant property, be the exciting cause of this inflammation in the case of evacuation from openings on the surface. This suggestion, however plausible, requires to be verified. In the case of Kirwan, urea was, comparatively speaking, excreted in considerable quantity in the urine; and I was unable to detect this substance in the blood, when the symptoms suggested the probability of the brain being injuriously affected by its presence in increased proportion. It has, however, as is well known, been frequently separated from the blood in Bright's disease in very sensible quantity. From the bruit, which accompanied the first sound of the heart, I suspected the existence of disease of the semilunar valves of the aorta; but this suspicion was not confirmed by the autopsy, which revealed only as the cause the roughened condition of the internal surface of the arch of the aorta. Of the popliteal aneurism the patient made no complaint, and it was some time after his admission before the tumor was discovered. It is singular that it existed for so long a time without appreciably increasing. In respect to treatment in the confirmed stage of this disease it is obvious that the only indication is the diminution or removal of the anarsarca either by the kidneys or from the cutaneous or intestinal surface. In the case before us, hydragogue cathartics appeared to afford the most relief. However, from any plan of treatment we can only anticipate temporary benefit. Local depletion, as cupping at the nape, is urgently required when there is threatening of coma. In proof of this, I may confidently appeal to the history of the case before us.

The urine presented the characters common to that excretion in Bright's disease. The average specific gravity deduced from the second table was only moderately low, being 1016·6. The extremes, so far as our observations extended, were 1037 and 1008. I did not accurately ascertain the average quantity of urine passed; although I am satisfied that generally it was not in that respect below the standard of health. The urea was not evacuated in the natural proportion. In the analysis given it amounted only to 7·68 parts in the thousand; whereas, in health, it at least amounts to double that quantity. The proportion of earthy phosphate was much less than in healthy urine, in which it exists generally in the proportion of 1 to 1000. In the last urine passed, only a trace of chlorine, in combination with a fixed base, was detected. Whether it existed in larger quantity in the urine before evaporation and incineration, I did not ascertain.

[To be continued.]

CASE OF POISONING BY THE BICHROMATE OF POTASH.

To the Editor of the Medical Gazette.

Sir,

I beg to hand you the following report of a case of poisoning by the *Bichromas potassæ*, for insertion in your journal. The toxicological works of Christison and Beck, and the admirable manual just published by Mr. A. S. Taylor, contain very short notices of the poison in question; and but one case where there was a post-mortem examination of the body.—I am, sir,

Your obedient servant,

George Wilson, M.R.C.S.E.

Surgeon to the House of Recovery, &c.

3, St. Peter's Square, Leeds,
Feb. 19, 1844.

William Rothery, ætat. 64, from reverse of circumstances had been for some years the subject of melancholy, and had once attempted to commit suicide by hanging.

On the 13th December, 1843, he walked from Huddersfield to Leeds, bringing a sum of money to his son-in-law, who resides at the latter place; but was unfortunate enough to lose, or be robbed of, the money on his way. He went to his son-in-law's house, seemed dejected at his loss, and, after having drunk about a pint of home-brewed beer (of which the former also drank several times), retired to bed at about 11 o'clock P.M. A grandson, who slept in the same bed with him, said that he snored very hard, and on the following morning he was heard by several members of the family to be breathing loudly as they passed his room door; but as he usually did breathe so when asleep, and they sup-

posed he might feel fatigued by his walk of the preceding day, they were not at all alarmed or suspicious, and did not disturb him: this was about 9 or 10 o'clock A.M. At about 11 o'clock in the forenoon, however, his daughter went to call him up, and found him dead. I was sent for immediately, and arrived within ten minutes.

He was lying upon his left side, in an apparently easy posture, the lower extremities a little drawn up to his body; his left hand under his face. His countenance was pale, placid, and composed; eyes and mouth closed; pupils dilated; no discharge from any of the outlets of the body; no marks or remains of vomiting or diarrhœa, nor any stain upon his hands or person, or upon the bed-linen or furniture. The surface was moderately warm.

On searching the deceased's clothes, I found only a few halfpence, and a paper containing about 1b. ss. of black powder; which, it appears, was a sample of a new dye-stuff, which he had brought for the inspection of some dyers at Leeds.

By order of the coroner I inspected the body the same evening, in the presence of another surgeon.

The subject was remarkably tall, muscular, and well-formed. The skin was clear, and free from all mark, eruption, or wound. The limbs were rigid, but had not quite lost their warmth.

On removing the calvarium, the brain and its membranes appeared perfectly healthy and natural; neither congestion nor effusion existed on any of its surfaces, nor in the substance of the organ itself.

The thoracic viscera were equally healthy; no interpleural adhesions. The structure of the lungs natural; no engorgement nor abnormal deposit. The heart was moderate in size; there was no particular distension of its pulmonic side, nor of the vessels connected therewith. The pericardium contained about four drachms of clear serum; the pleuræ about an ounce and a half each.

On opening the abdomen, the viscera generally were loaded with fat; but in other respects presented no unusual appearance externally. The liver contained several hydatids, the largest being the size of a hen's egg; in other respects its structure was healthy. The gall-bladder was shrunk, and nearly empty.

The structure of the kidneys was quite natural, with the exception of an hydatid on the surface of one of them. The bladder contained about Oss. of urine.

The stomach was removed in the usual manner, ligatures having been first applied to the lower part of the œsophagus and commencement of the duodenum. On opening the stomach, nearly a pint of black, turbid, inky-looking fluid was discovered; this was set aside. The mucous membrane of the stomach was red and very vascular, particularly at the union of its cardiac extremity with the œsophagus, but this redness I considered at the time might be partly accounted for by the intemperate habits of the deceased; who, I was informed, had lived almost entirely upon malt liquor. The redness did not extend into the œsophagus or duodenum, nor were there any dark stains observable upon the mucous surfaces of these, or any other part of the intestinal canal.

In the absence of any obvious cause of death, I suspected that the deceased had died from poison, and the similarity, or rather identity, of colour of the contents of the stomach with that of the dye ware found in his clothes, pointed to the latter as the substance in which the poison was most probably contained: accordingly, on analyzing them, I found they were in fact the same, and that both contained a considerable proportion of bichromate of potash. Besides this, the bulk of the dye-powder was composed of bitartrate of potash, (argol) and fine sand.

The history and post-mortem appearances of this case would seem to indicate that the salts of chromic acid do not act upon the body merely as irritants, but that they have some more direct effect upon the nervous system, for we cannot attribute the fatal event in this instance to the gastritis, which was neither general nor very severe, and which could scarcely have caused death in so short a time; that is, supposing the poison to have been taken the night before, after the deceased had discovered his loss. Again, there was neither vomiting nor purging, but, on the contrary, the poisonous solution seems to have remained quite at rest in the stomach, and thence propagated its influence, of whatever kind, which proves that it has rather a sedative

effect than an irritant, the latter being usually attended with vomiting and diarrhœa.

The mode of death also, by syncope or coma, which (if we may judge from the deceased's position, &c.) seems to have been free from severe pain, leads to the same conclusion.

PARTICULARS OF A CASE OF MILKY URINE.

To the Editor of the Medical Gazette.

Sir,

In the Number of the Medical Gazette for Oct. 27th there is a case of milky urine described by Dr. Golding Bird, who, in the same paper, expresses a wish for further information with regard to urine presenting oleaginous or milky characters. About the same time I was attending a case of anasarca with albuminous urine after scarlatina; and, as the fluid exhibited some unusual appearances under the microscope, I took notes at the time, in expectation that, scarlatina being then prevalent, I might meet with other cases with which I could compare it. In this I was disappointed; but thinking that the particulars I am about to mention may be interesting to Dr. Golding Bird, and others engaged in similar investigations, I submit them to you for publication if you deem them worthy a place in your journal.

October 7th, 1843, I was called to a boy, æt. 7, who was seized the day before with violent sore-throat, which was followed on the third day by the eruption of scarlatina, that proceeded regularly to desquamation. Before this process was completed, he exposed himself to cold, October 10th, and the next day the fever returned: the face was swelled, the abdomen enlarged and painful, with ascites, and dulness over the region of the liver, which protruded considerably from under the ribs. He also complained much of pain in the side of the throat originally affected. There was much cough, and even orthopnœa; but I could detect no affection of the substance of the lungs, nor of the pleura nor pericardium, though the wheezing in the throat prevented an accurate diagnosis. Tongue furred; bowels confined; urine muddy, greenish, coagulating by heat; skin hot and dry; pulse 180. He had calomel and squills, with a saline diuretic mixture.

The urine, when examined the next day, was of sp. gr. 1014. Under the microscope it exhibited nucleated globules and amorphous particles, both of various dimensions; but I was more particularly struck by the appearance of numerous bodies, evidently possessing the same composition, though of different forms and sizes. The most perfect resembled a single *cheval de frize*, or calthrops of six spikes, the nucleus or central boss of which was translucent, the spikes being sword-shaped and transparent, which I cannot better compare than to splinters of glass stuck into a ball of gum-arabic or mastic. None had more than six spikes, and some had only one; nor did the spikes appear to transfix the nucleus, but rather projected from it in various directions. There were no nuclei without spiculæ, nor any spiculæ unattached to nuclei. Nitric acid produced no change whatever upon any of the bodies, but liq. potassæ immediately dissolved the nucleated globules, the spiculæ with their nuclei, and some also of the amorphous particles. As the urine dried on the glass, the solid matters assumed a filmy appearance, interrupted by crystals of a circular and sword-shaped figure. Sometimes one or more of the arms of the sword-shaped figures were longer than the rest, and some of the circular figures were divided into four, five, or six portions.

A few days afterwards I procured some more urine, when some improvement had taken place in the symptoms; but I was not able to examine it for two days, by which time it had become very alkaline, and had deposited much lithic acid red sand, in the form of mulberry-shaded grains under the microscope. Neither nucleated globules nor calthrops were discoverable in this specimen, but there were quantities of amorphous particles, and numerous oily globules floating on the surface.

A third quantity of urine contained quadrangular, pentagonal, and hexagonal crystals, with bevelled or sloping sides and edges.

After this, the patient discharged blood from the nose, bowels, and bladder. The urine was loaded with colouring matter of the blood, and was only 1016 sp. gr. Its sediment

exhibited lithic acid and amorphous particles, but no oily globules.

Nov. 9th.—The boy is now recovering; and yesterday his urine did not coagulate with heat.

11th.—Urine yesterday was 1012·5 sp. gr. There is still some ascites. In a few days afterwards he was discharged cured.

From the effects of the reagents employed, I conclude that the various forms of crystallization were constituted by modifications of lithic acid and muriate of ammonia, particularly as the sword-shaped crystals bear considerable resemblance to the arborizations of the latter salt; but it is difficult to ascribe an origin to the oily globules.

A putrid specimen of the bloody urine, which I have examined this evening, gives to view, when dried on the glass, vast quantities of epithelial scales and amorphous particles, but very slight, if any, indications of oily matter.

I am the more induced to believe the sword-shaped crystals to be muriate of ammonia, from observing that dried saliva not only exhibits the beautiful arborizations of this salt, as figured by Raspail (plate 6, fig. 12, Chimic Organique), but also imperfect sword-shaped crystals.

In conclusion, I shall feel obliged if any of your correspondents will inform me where I may meet with figures of organic salts, &c. as exhibited by the microscope.—I remain, sir,

Your obedient servant,

T. Ogier Ward, M.D. Oxon.

21, Lower Phillimore Place, Kensington,
February 21st, 1844.

CONTRIBUTIONS TO THE PHYSIOLOGY OF THE HUMAN OVARY.

By Charles Ritchie, M.D. Glasgow.

(*For the Medical Gazette.*)

[Continued from p. 654.]

Part I.

Section III.—*Cases in which menstruation, although commenced, had never been regularly established, the individuals not having had children.*

1. Elizabeth C——, aged 17½ years; died of typhus about the fourteenth day. General health not good; menses irregular, but present at commencement of fever. Ovaries large. *First ovary* was destitute of cicatrices, but marked throughout with dark, blue-coloured points, some as large as pin-heads, and others smaller, proceeding from Graafian vesicles under the peritoneal coat; also by one minute scarlet-coloured puncture, in which the peritoneum was as if newly perforated, and by another similar but less recent. Inner surface of gland very fleshy, vascular, and thick, and occupied by vesicles varying in bulk from that of a small dried pea to a pin-head; the vessels in some of them loaded with dark blood. No vestige of a coagulum, yellow, or white body. *Second ovary:* outer surface smooth, and without cicatrix. Size constituted mainly by one overgrown vesicle, with deeply congested coats, and by three or four others, some of which were as large as garden peas. No vestige of any rupture having ever occurred was noticed.

2. Marion K——, aged 18; in delicate health for two years, and menstruated only once, six months previous to death, which was occasioned by typhus fever. Ovaries plump, large, and smooth, being marked only by a few puncta, one of which was recent, and of size of a pin-head. No small vesicles had penetrated to exterior of peritoneal coat, but at one part this membrane was getting thin for about the size of a split pea, over an enlarged ovisac*. Inner surface of both ovaries turgid with vascular vesicles, some of which were just beginning to penetrate the inner surface of the peritoneal coat; of the size of mustard seed, and many others as large as peas. No trace of a clot, yellow or white body.

3. —— ——, aged 19, and robust. Had menstruated three times only during life, the last time being only three months before her death, which was occasioned by fever. Ovaries large and plump, and marked by one linear scar only, which was also faint and doubtful; but their surfaces were roughened with innumerable very minute vesicular elevations, some of which appeared to have burst, leaving shallow open puncta, while, under the peritoneum, were some dark

* The term ovisac is used throughout this paper as a synonym of the Graafian vesicle or follicle.

coloured ovisacs, making their way to the surface. The interior of both glands was literally crowded with Graafian vesicles of various sizes, many extremely vascular; and corresponding with the external linear scar were the remains of a light fawn-coloured vesicle, all attempts to wash off the colouring matter from the inner surface of which were fruitless; a membrane of considerable consistence, which could be cut, and raised with the blow-pipe, being interposed. Enclosed within the laminæ of the broad ligament connecting the ovaries with the tube, and also in the same situation, but suspended from the ligament by long delicate pedicles, were several vesicles, which contained a granular fluid having molecules, described by Dr. Andrew Anderson, who examined it, as resembling altered blood globules, but not containing any structure like an ovum.

SECTION IV.—*Cases in which menstruation had continued regular for a longer or shorter period, but had been suppressed for some time before death, the women never having had children.*

1. Charlotte B——, æt. 25, a house servant of good character. Menses irregular; was chlorotic, and died of typhus. Uterus small, its walls slender, a minute polypus projecting from inner surface of orifice. Labia healthy.

First ovary, plump and thick; four reddish vesicles of minute size jutting through the peritoneal coat; imperfect remains of three cicatrices with subjacent yellow cysts, one of which could have contained a small dried pea, and had a loose, pulpy, brain-looking inner surface, with a white shining exterior; the others reduced to a smaller size, but exhibiting a white stellated central line, surrounded by serrated yellow matter. A number of small unbroken Graafian vesicles were observed near the surface, and also two small, empty, white coloured cysts, with their coats considerably thinned.

Second ovary contained an immense number of minute vascular Graafian vesicles, some of which were projecting on its external surface, and two had burst, forming red puncta. There were present also the remains of four yellow bodies, one of which was intersected in its long diameter by a central line, consisting of the walls of the cyst agglutinated by a thin film of opaque whitish tissue; which might either be its lining membrane or lymph. One white, fatty, or cellular-looking hollow body in ovary.

2. —— ——. Died of a chronic disease. Ovaries small, triangular, and marked externally with old cicatrices which were become faint, and with about a dozen of very minute vesicles, and some points, which were similar vesicles recently abraded and discharged.

3. Mrs. P——, aged 34 years. Died of empyema, and had not menstruated for some months. Known to have had no child. Ovaries of good size. First ovary strongly fissured on its free edge by old cicatrices. No recent scar, but whole surface sprinkled over with clusters of minute vesicles, some as large as a pin-head, their contents fluid, and escaping on being punctured; others seen only by means of a weak magnifier, and gritty, as if the liquid in them had become inspissated and hardened. Inner surface of gland plump, but pale, without any appearance of Graafian vesicles except two or three near the surface, recognized with the magnifier. No yellow substance, but four distinctly marked globular white bodies, chiefly of small size, but capable of being rolled out from their respective situations, were observed.

Second ovary exhibited a few faint fissures in its surface, the indications of former cicatrices, and also one or two fluid vesicles of minute size, but was very generally covered by points so small as scarcely to be seen by the naked eye, grating against the edge of the lancet, and having some resemblance in colour, transparency, and consistence, to crystals of candied sugar. Some of these could be turned out of the shallow cup-like depressions of the peritoneal coat in which they were seated, and rolled about under the finger, or caught on the point of a lancet, and when exposed to heat they shrank and became solid. Inner surface of ovary plump, with several pale vesicles, one being as large nearly as a hemp-seed, and in the peritoneal covering; also, a very white, corrugated, granular looking body, of about the size of a hemp-seed, situated near the free edge of the ovary, and having a pearly, shining inner surface.

Cases in which positive information respecting the recent suppression of menstruation is not recorded, but which are believed on various good grounds to have been of this kind, the parties not having had children.

4. —— Hawkins, aged 20, a prostitute. *First ovary* covered, in more than a half of its exterior, by adhesions of the tube, and occupied by two or three obscure appearances of scars, and by four or five small vesicles, similar to those observed in children, and having the peritoneum covering them much attenuated. Inner structure of ovary contained a number of small, pale, unbroken Graafian vesicles, some of which were near to the surface; and in the centre of the gland two or three were found empty, and having their coats, which were of very delicate structure, stained of a deep black colour, but without any observable cicatrix or opening in the outer surface of the ovary connected with them.

Second ovary surrounded along its whole circumference by adhesions of the tube. Gland smooth, and without cicatrix. Two small pale ovisacs projecting like blisters from periphery; these were situated in the thickness of the peritoneal coat, having its inner aspect as their inner, and its outer as their external covering, just as under puberty. Two or three small, empty, attenuated nuclei, having their coats dyed black, and without any corresponding cicatrix, were seen in the centre of the gland. No yellow or white bodies in either ovary.

5. ——, aged 19. *First ovary* exhibited, externally, nine cicatrices, all closed and smoothed over as if from age, and several blue macules, which, on opening the gland, were seen to proceed from the presence under the peritoneal coat of unbroken Graafian vesicles, while near to some of the scars were small gamboge or ochre coloured cysts, with pellicular coats, and no appearance any where of white corrugated bodies.

Second ovary had three scars of old date, and five vesicles, some of them projecting through outer coat. In the centre of the gland was a cyst without any seen opening from it, the walls of which were thin but melanotic, and contained some fibrin of a high gamboge colour; also a small fabiform cyst near the surface, with a thick corrugated outer coat of a deep rhubarb colour. In this the colouring matter could not be lifted out like effused fibrin, and it was arranged on the interior with all the regularity of an organized substance; but no internal membrane could be demonstrated. Some obscure appearances of four or five white bodies.

6. ——, aged about 25, and supposed to have been a prostitute. Os uteri circular and small. *First ovary:* exterior white and polished, with the exception of one or two circular shaped puncta, and interior contained only a few small and pale ovisacs. The *second ovary*, with the parillon and about half of the tube, were enclosed in a covering of broad ligament. Near to the edge of the tube, but more than half an inch from the ovary, a moveable hard tumor of about the size of a raisin was discovered, and, till exposed, was supposed to be the ovary. It was easily enucleated, having no organic adhesion except at one end, where it was bound by a pedicle, and was found to be a hollow cyst of very white cartilaginous tissue, of an irregular oblong or kidney shape, having a scabrous, indented, or fissured, and convoluted surface. It was three, or perhaps four lines in thickness, and could not be separated into laminæ, although its outer surface seemed covered here and there with a delicate pellicle. Its inner surface, which was deeply fissured, was painted with a bright yellow substance, of the consistence and appearance of inspissated honey, which having no interposing pellicle, could easily be rubbed off with the finger. The internal cavity was as large as a garden pea, but reniform. The tissue interposed between this body and the ovary had imbedded in it a number of unburst vesicles of various sizes, having very pale coats. Interior of ovary also pale, with scarcely an ovisac apparent to the naked eye. There were no vesicles in the vicinity of the opposite ovary, the tube and ligaments of which were normal.

7. ——, 45 years of age. One ovary much marbled with inky stains of various sizes, and of a circular form, having their centres constituted by a white spot, which might be a small sized cicatrix, or by a spiracular lesion of the peritoneum; and internally the gland was occupied chiefly by one very large ovisac, admitting of the demon-

stration of three coats,—one connected with the stroma, and the thickest, another pellicular, and the innermost so delicate that the fluid contents transuded by mere handling. The other ovary was covered with numerous shining solid points, something like the germs contained in the roes of the smaller fishes, and its interior was occupied by similar bodies, many of them, however, of larger size. They appeared to be ovisacs.

SECTION V.—*Cases in which the subjects had outlived the menstruating period of life, and were without children.*

Mrs. G——, aged 50. Uterus about one and three-fourths inches in length, but with all its parts symmetrical. *First ovary:* external surface nearly smooth to naked eye, but with a simple magnifier it was found occupied by numerous pores from which a transparent fluid escaped on pressure, and at one point there was a distinct minute vesicle, similar to those observed in children. Inner surface exuded transparent fluid freely when cut, and was occupied by numerous miliary vesicles, some observable with the naked eye, and vascular, others only with a magnifier, and destitute of red vessels. *Second ovary:* outer surface smooth, and free from cicatrices of ordinary kind, but occupied by about a dozen minute vesicles, some easily observed with naked eye, and others with the magnifier, and also by several pores or capillary sized puncta, which appeared to proceed from vesicles of the same kind which had burst and discharged themselves. Inner surface of ovary sprinkled with many very small Graafian vesicles, but no appearance in either gland of any yellow or white body.

2. Mrs. ——, aged 70. No lineæ albicantes anywhere, or fissures in os uteri. *First ovary* size of a large kidney bean, smooth, and of a very white colour, without cicatrices, but having two distinct blisters or vesicles, each of the size of a small segment of a pin-head, and filled with fluid. Interior of gland exhibited two distinct whitish-yellow, fatty-looking bodies, of size of a large hemp-seed, with traces of some others; and, in addition, various slender globular shaped Graafian vesicles (best seen with a magnifier), which were filled with transparent fluid. *Second ovary* of similar size, but more irregular shape; surface white, with exception of three or four vascular points, at one of which there was an indistinct appearance of a minute pellicular vesicle, and at another of a punctulated solution of the continuity of the peritoneal coat, and from the surface of this as well as of the first ovary a transparent fluid exuded on pressure. Inner surface occupied by many Graafian vesicles filled with their usual contents, some having their coats injected with red blood, but more generally white; and, at one point near the periphery, there was an appearance as if a vascular vesicle of about the size of a pin-head had burst, and had blood effused into its cavity.

3. Christian M'W——, aged 50. Hymen entire; both ovaries sunk in size, and deeply fissured and indented in all directions, by remains of cicatrices now representing lines, some occupying the whole length of the glands, and others their small diameter. The inner surface was vascular, without any traces of vesicles, yellow, or white bodies. The glands seemed to be absorbed to their fissured and corrugated peritoneal covering, lined with a thin vascular coating.

4. ——, aged about 50 years. No appearance of having borne children. Ovaries much shrunk, and indented with cicatrices, corresponding to which were two or three whitish yellow points, of a miliary size, one of which was distinctly hollow, the structure soft and delicate. No Graafian vesicles present.

5. Examined the fallopian tubes of a woman aged 71 years. Air was made to traverse both, on application of moderate power, although, in one of them, with difficulty.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Natural History, Pathology, and Treatment of the Epidemic Fever at present prevailing in Edinburgh and other towns: illustrated by Cases and Dissections. By JOHN ROSE CORMACK, M.D. Edin. F.R.S.E. &c.

DR. CORMACK enjoyed excellent opportunities of studying the late fever in

Edinburgh, having been Physician to the New Fever Hospital, where he states that he reported "minutely" almost every case committed to his charge. He has also, since that time, daily devoted a large portion of his time to observing and recording cases; both as influenced by medicine, and when allowed to run their course undisturbed. His principal object is to present a faithful account of the natural history and pathology of the epidemic, together with the details of treatment.

The ordinary or moderately congestive form of the disease is thus described. The countenance of the patient has a peculiar aspect, of which our author endeavours to convey an idea by calling it "bronzed," but adds, that no words can convey an accurate idea of what is attempted to be described; which, however, is so characteristic as to have arrested the attention of all visitors to whom it has been pointed out.

A great similarity was observable in the manner in which the symptoms made their first attack. The patient was seized with coldness, rigor, headache, pain in the back, and prostration of strength; the latter symptom, however, being generally less urgent than in ordinary cases of fever. The cold fit has usually lasted from half an hour to two or three hours, after which the headache becomes more severe, with dry burning heat of the general surface, and urgent thirst.

The hot stage is followed by sweating, usually to a great extent, and lasting for several hours without producing any relief to the general symptoms. The perspiration has a very disagreeable smell, and is of marked acidity, deeply reddening litmus-paper.

Even during the first paroxysms the pulse is very frequent, sometimes reaching 150; wiry and tremulous during the rigors, but hard during the hot stage; although when the sweating has set in it becomes fuller and softer.

During the first 48 hours the tongue is commonly white, yellow, or brown, but moist, "excepting at the point, where there is usually a clear space, extending over a space often shaped like a triangle, the extremity of the tongue forming the base."

During the first few days some of the patients have occasional returns of rigor, but more generally they are in a state of dry burning fever, partially relieved by occasional sweating.

Nausea and vomiting attend a considerable number of cases during the first few days, even although they do not prove ultimately severe: these symptoms are usually attended by pain at the pit of the stomach.

Muscular pains of severe character uniformly attend the onset of the disease, and last for several days. Pain about the abdomen, more especially over the liver and pubes, are also very common.

Sleep is generally banished by the sufferings above detailed, and is only to be procured by means of opium.

A remission generally took place on the third day: nay, the author adds, "it occurred in all the cases which I have had an opportunity of attentively observing from the invasion onwards."

On or about the fifth day there was generally an evident manifestation of the disorder abating, and often the improvement was both sudden and complete, the favourable change being for the most part ushered in by some discharge, as sweating, epistaxis, or diarrhœa.

After this, the pulse, tongue, and skin become entirely natural, and the "bronzing" of the face begins to disappear.

From this time the patient improves, progressing till the fourteenth or fifteenth day, when there usually occurs a relapse, marked by a paroxysm of fever similar to that which attended the first attack. Sometimes this second attack is more severe than the first, but commonly the reverse is the case. In those who are pregnant, abortions now frequently take place, and in the more unfavourable cases, jaundice, delirium, diarrhœa, dysentery, and other severe symptoms, supervene.

In not a few cases a second relapse occurs about the 21st day. After this, in those who are strong and of good constitution, the recovery is rapid and complete; but in the old and debilitated, the improvement is very slow; nevertheless the epidemic, upon the whole, has been very far from a fatal one.

Various cases are detailed, in which, however, we do not think it necessary to follow our author, but proceed to the second form, designated the "highly congestive." In this one of the most common symptoms is the yellowness

of the conjunctivæ, and, indeed, of the general surface of the body. This appears between the third and seventh day, and is most intense upon the face, neck, chest, abdomen, and thighs. The urine becomes as dark as porter, and the stools absolutely black, with an obvious admixture of blood. Together with these discharges there is vomiting of "coffee-ground like" matters.

As indicative of cases being destined to present these unfavourable symptoms, the countenance early exhibits a deep persistent purple colour, by which the future severity of the case may be foreseen.

In the severe cases there is generally a *remission*, but not amounting to an *intermission*, about the seventh day.

On post-mortem examination excessive capillary congestion was always met with in the intestines, and occasionally even an exudation of blood between the muscular and mucous coats of the intestines.

Taking in connexion all the peculiarities of the epidemic, the following appear as the positive and negative characters which it presents.

1. The sudden and violent invasion of the disease.

2. The bronzing or purpling of the countenance.

3. The almost uniform occurrence of one or more relapses.

4. The large proportion of cases presenting the phenomena of yellow skin, black vomit, and hæmorrhages.

5. The short duration of the pyrexial state, and its mode of terminating.

6. The severity of the muscular and articular pains.

7. The severe vomiting, with the accompanying affections of the liver, spleen, and bowels.

The fever has also presented some sequelæ which deserve notice: the first, and one of the most remarkable among these, is a peculiar form of "ophthalmitis," generally preceded by amaurotic symptoms. This bears a resemblance, in some of its characters, to rheumatic ophthalmia, and is extremely similar to that described by Dr. Mackenzie, of Glasgow, in this journal (November 24th), as following the fever lately prevalent in Glasgow; and also by Dr. Jacob, as having occurred in Dublin in the fever of 1826.

We come now to the *treatment* of the disease, on which we find some judicious and instructive remarks. The author recommends that we should be "ever *ready* but never *hasty*" in our interference, endeavouring to guide our patient safely through a course which he must pass, rather than to arrest his progress by *heroic* means.

The evils to which a tendency is manifested, and which it is our chief business to guard our patient against, are—

"1st. Congestion of the mucous membrane of the stomach and intestines, terminating in effusion of blood, and subsequent destruction of large portions of this tissue.

"2d. Congestion of one or more of the abdominal viscera, particularly of the liver and kidneys, disabling them from the performance of their secretive functions, thereby causing bodies to circulate with the blood which ought to be separated from it, and which bodies we know act as poisons when not so eliminated from, or when directly introduced into the circulation.

"3d. Debility and sinking.

"4th. It will also be necessary to speak of the measures to be adopted to prevent or modify relapses."

The steady use of purgatives cautiously administered, and determining the blood to the surface, are the means recommended to obviate the first of these evils. In some cases blood requires to be abstracted in small quantity. When the kidneys are not acting efficiently a small quantity of blood is to be taken from the loins; or even dry cupping practised, if the debility be great. In this last case cordials and stimulants are recommended.

To be more particular—few bore the loss of more than ten ounces of blood, several becoming affected with vertigo and faintness after losing only two or three ounces. Some, while the blood was flowing, declared that the headache and vertigo had quite left them, but were suffering as severely as ever within half an hour after the arm had been tied up. Much more effectual relief was afforded by the operation of a purgative, a warm foot-bath, and cold lotions to the head. In several cases in which there was pulmonary inflammation, the symptoms speedily disappeared under the use of antimony and morphia, or morphia and ipecacuanha. And the same remedies, combined with counter-irritants (sinapisms or blisters),

are represented as safe substitutes for bleeding in thoracic complications!

"As the result of my experience (adds our author), in this matter, I would say that the cerebral, pulmonary, and abdominal complications in which it is proper to abstract blood are extremely rare, and that in very many such instances it is a most hazardous practice." Some of the most severe and threatening cases of abdominal affection, with pain and tenderness of the most urgent nature, were safely treated by means of the diligent use of warm fomentations and poultices. Enlarged spleens have also done well under the use of the same means. Medicines which act upon the skin were most resorted to the first fortnight, (such as Liquor Acetatis Ammoniæ, James's powder, Antimony, and the Pulv. Ipecac. Comp.); but all these were afterwards abandoned, as it was soon perceived that those who did not take them sweated as copiously as they who did.

Sponging with hot and tepid water was generally found to be useful, and bathing the feet in hot water tended remarkably to allay restlessness. Poultices and warm fomentations were also very serviceable in the abdominal complications.

Cold to the head, if diligently used, was of great service in the cases where headache was urgent. Cold was also applied to the surface generally or partially, according to the general or local nature of the heat; but caution was used in this respect, as where the skin was not very hot and dry the cold applications did harm.

Warm drinks early in the night disposed to sleep, and were given as soon as quiet was established in the wards.

Cold drinks were only allowed with caution, as they were otherwise found to excite pain in the stomach, and vomiting.

Purgatives were cautiously but steadily used, and with most important advantage. The object kept in view was merely to empty the bowels, without producing any thing like catharsis. Compound powder of jalap, compound colocynth pill, and calomel, were the purgatives chiefly used. When there was much flatulence (which is said frequently to have been the case), the aloes and assafœtida pill is represented as having been given "with the best possible effects."

Enemata were also given when necessary to evacuate the bowels; but the more stimulating cathartics were never used except where there was an appearance of comatose symptoms about the head. Castor oil is favourably spoken of as producing effectual evacuations without irritation. Medicines which act on the kidneys were employed with advantage when the urine was particularly scanty and scalding, The chief ingredients of this kind were Nitrate of Potass, and the Spirit Ætheris Nitrici, with warm fomentations, and in severe cases cupping on the loins. When alarming head symptoms supervened, the author gave especial attention to the kidneys, from the idea that the urea not being properly eliminated, was acting as a poison on the general system. In order to check vomiting, opium was the medicine chiefly used in one or other of its forms, and one expedient particularly commended in such cases is a drachm of the solution of muriate of morphia as an enema. "Vomiting of the most urgent kind, when nothing is retained on the stomach, is sometimes checked and most commonly moderated by this means."

Mercurials are spoken of with very qualified commendation. The "tolerance" of this medicine in fevers, it is remarked, is very great; but it is added, that when salivation occurred it was always simultaneously with, and not as a forerunner of, returning health.

To relieve the muscular and arthritic pains, colchicum was tried, but no relief could be observed to flow from its administration, though given both in large and small doses. The hydriodate of potass was supposed to afford relief, sometimes; the pains seldom yielded under any treatment till the strength returned, but some benefit resulted from friction with a liniment of soap and opium.

Tonics were very useful during the intermissions, and in the convalescence. Cusparia or cascarilla was that generally chosen by our author with which to commence, after which he went on to the mineral acids and sulphate of quinine. In those previously given to drinking, quassia seemed to answer best. Port and sherry wines are considered as the best of all the tonics, but were comparatively little used, owing to their expense. Sulphate of

quinine seldom prevented relapses, and is not highly spoken of.

The little volume before us, of which we have extracted the essence, is highly creditable to the author, being a very unassuming account of the epidemic lately prevalent in Edinburgh, and containing a great deal of useful information, evidently the result of careful and intelligent observation.

MEDICAL GAZETTE.

Friday, March 1, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE COLLEGIATE SYSTEM.

IT is always gratifying to a journalist to shew that his predictions have been fulfilled; and his gratification is still greater when it appears that, in foreseeing the possibility of some great improvement, he has absolutely indicated the road to be pursued, and removed difficulties from the thorny path of reform.

It is, therefore, with particular pleasure that we refer to our article on Medical Colleges, written nearly three years ago*. What was then a hope is now a fact; the *venue* only is changed; for what we expected at Guy's has taken place at Bartholomew's. More recently, indeed (June 16, 1843), we commented on the scheme then in full preparation for the benefit of Bartholomew's; and our anticipations have been verified, we believe, to the very letter.

The six houses in Duke Street, which we spoke of, have been turned into chambers for students, after having been altered and repaired during the summer months. A dining-hall and kitchen have also been built; and it is expected that students should dine in the hall, unless notice to the contrary is given to the manciple in the morning.

The weekly terms are:—

	£	s.	d.
For each student in rooms on the first and second floors	1	15	0
For each student in rooms on the ground and third floors	1	12	0
For two students occupying one sitting room, with two bedrooms, each . .	1	9	6

These sums include rent, provisions, attendance, coals, and candles.

The daily meals are three in number, namely, breakfast and tea in the students' rooms, and dinner at five precisely in the hall.

The provisions are sent from the Albion Tavern, in Aldersgate Street.

We have dwelt on these terrene matters with minuteness, as they are of considerable importance, and a previous knowledge of the state of things may save some trouble to our younger readers, and their friends, in distant parts of the empire.

And now for one or two points of discipline.

Prayers are read every morning in the hospital church; many students are there, but attendance is not compulsory.

Friends who visit students are to leave their rooms by 11 P.M.; the students themselves must be home by 12; and no one is to be absent during the night without permission of the warden.

The maintenance of these useful rules will depend in part on the firmness of the present sensible and judicious warden, Mr. Paget, and, in part, on the zeal with which he is supported by the governors. Should a black sheep ever arise among the flock, he must, of course, be expelled without delay:

Ense recidendus, ne pars sincera trahatur!

The plan has now been in operation since October 2d, and works admirably.

The sets of rooms are twenty-five in

* MEDICAL GAZETTE, April 2, 1841, page 71.

number; and as twenty-three are occupied, and there are applications for the other two, the College may be considered full. We earnestly hope that, ere long, the College may be considerably enlarged; and that so fortunate a hospital, rich in lands and houses, will extend an acknowledged good to a greater proportion of its students.

One obvious advantage which the students enjoy is that of adjoining the hospital.

Another is that of having their professional studies superintended by a man of zeal and knowledge.

A third advantage, which we see in the dim future, through the long vistas of time, is the foundation of a real medical school:

Nascere, magne puer!

A school, in short, where as much pains should be taken in teaching the art of healing, and its ancillary sciences, as are now elsewhere bestowed in teaching the ancient and modern languages, or the pure and mixed mathematics.

Let us consider how this is to be done.

It may seem a paradox to assert that the essence of genuine teaching consists rather in the pupil's repeating the thing to be learned to his tutor, than the converse; yet so it is. The young Etonian does not learn Horace so much by having it explained to him, as by himself explaining it to his teacher. And this holds good with all the branches of knowledge which are generally taught with success. If you want to know the subject thoroughly, you must construe, or demonstrate as well as you can, and submit to have your mistakes corrected by your master. The task is toilsome, but necessary, and no learner, whatever be his age, is exempt from it. Suppose, reader, that being now a middle-aged man, you wished to acquire German. Do you think you could effect your purpose by hearing a professor from Berlin or Göttingen lecture on the language and literature of Germany? *Minimè gentium.* You must go to Dr. B., and by taking 100 lessons would attain your object better than if Schiller and Göthe had risen from the dead to lecture at the Hanover Square Rooms. The reason is plain enough. The student who hears the lectures on German is in a reverie half the time, and during the other half acquires no practical knowledge of the thing wanted. The student with Dr. B. works his way through a *Lesebuch*, writes some quires of exercises, and talks that language on the banks of the Thames which he hopes one day to speak on the shores of the Elbe and Rhine.

It is just the same with other things. Could a Cambridge man learn any part of mathematics, from the lowest to the highest, from Euclid to Laplace, by merely hearing it talked about? Certainly not. He works the problem with, *i.e. to* a tutor in the lecture-room, and often to another tutor out of the lecture-room.

Could a scholar in the fifth year of his age learn the criss-cross row, or the genuine method of spelling a polysyllable, by an *ex-cathedrâ* lecture? Certainly not.

In our article of April 2, 1841, we remarked: "From no small experience, we are convinced that one of the greatest difficulties the student has to contend with is his ignorance of how and what he is to study—a difficulty so great that the majority even of those best disposed to work utterly lose their first three or four months in trying to find out what they should study, or in a vain attempt to study every thing, or in learning that which they had far better postpone to a later period. And even when one does hit upon the right object of pursuit, it is no easy matter for him, if his mind have not been more than

commonly disciplined, to determine how he should study, or to decide from time to time how much he knows, and judging from his past progress, to tell what his further course should be."

Every one will readily acknowledge the truth of this picture, and every one will equally confess that these difficulties could not occur in a real school of any kind. From the University of Cambridge down to the humblest suburban academy, no student can be at a loss to know what he is to study. The lesson is a known tangible thing, not a vague possibility. Yesterday, for instance, the freshmen in D. College got to v. 904 in the Medea, and Book III. Prop. 4 in Euclid; to-day, therefore, they will begin their construing and demonstration at v. 905 of the former, and B. III. Prop. 5 of the latter.

Precisely the same thing might be done with any decent text-books in anatomy, physiology, or the practice of physic.

But some one will object, "how are the class to understand the preparations and plates necessary for the illustration of these topics?"

Answer. Unless the pupils are very far advanced, the professor will give a short explanation of these adjuncts on the day the lesson is set, just as a professor of a science or language occasionally does; and on the next day, when the lesson is repeated to him, he will clear up the remaining difficulties by a luminous commentary.

It is true, and a curious psychological fact it is, that a boy may pass through Eton or Harrow without acquiring any but the most superficial knowledge of the languages he is supposed to learn there. Yet even this smattering is probably more than what is obtained by the student who sits in a dreamy state at a lecture which is not a lesson. He who had been obliged, day after day, to give his teachers a *vivâ voce* account of the function of digestion, the symptoms of pericarditis, and so forth, from the text-books of the school, would rarely present himself for examination at Hall or College as a complete vacuum of knowledge. The speedy appearance of clear, well-defined text-books, would be one of the minor advantages to be derived from this reform.

Before concluding, we will add that the adoption of the collegiate system in the medical school at Birmingham was warmly advocated by the Rev. Vaughan Thomas, about a year ago. His pamphlet, which shows great zeal in the good cause, was printed for private distribution only.

The existing College at Bartholomew's, and the one at Birmingham which ought to be called into existence, have our heartiest wishes for their success.

A LATE INQUEST IN THE BRIDGEWATER UNION.

We wish that we could call the following case a remarkable one. It is to be feared, however, that it is rather an example of a rule, than an exception to it; and that the history of poor Mary Ann Evans is merely a sample out of a multitude—an exemplification of the fate of those for whom, in Malthusian phrase, there is no place at Nature's table.

In the beginning of January last, Mary Ann Evans, aged 14, was taken from the Bridgewater Union Workhouse, as a servant to a Mr. Waterman, of Spaxton. At this time she appeared dull and stupified, but was thought to be in good health. No further account of her health is given until Saturday, the 17th of February, when she was already in a desperate state. Mr. Waterman then desired a carrier to take her back to the Union House, which was accordingly done in a cart without springs. The unfortunate patient was suffering from pain in the left side and knee. When the cart moved, Evans complained of great

pain, and cried out "stop, stop." The driver stopped for five minutes; but Mr. Waterman then allowed the cart to proceed. The pain in her knee was increased by passing over the stones, and the cart went very slowly on her account; so that, if the time is rightly given in the narrative, a journey of five miles occupied three hours. On arriving at the workhouse she was worse; and when the people of the house came to carry her in, she said "I cannot bear for you to touch me. I won't let you touch me."

Mr. Abraham King, surgeon to the Union, was immediately sent for, and bled her on his arrival. The next day he saw her twice, and bled her again in the evening; on the Monday morning she died. Mr. King thought her case a hopeless one when he first saw her. On a post-mortem examination, several ounces of serum, containing lymph, were found in the pericardium; the knee-joint was distended with pus, and the thickening of the membranes shewed that the disease was of some weeks' standing. Mr. King was decidedly of opinion that the death of M. A. Evans was hastened by her removal.

The jury brought in the following verdict:—"Died by the visitation of God; but the jury think that a deal of blame is attached to Mr. and Mrs. Waterman for their negligence in not applying to a medical man, and the deceased's death was greatly accelerated by the removal." (Times, Feb. 24th, 1844.)

This case of domestic neglect and cruelty shews almost white, when contrasted with many of the dark histories registered against the New Poor Law. It is an instance of a system of ill-treatment which one need not go to Somersetshire to witness—the over-working of friendless maid-servants in *mediocre* families. They are worn-out, used-up, and then sent to perish where they may.

"I have seen West-Indian slavery," said a philanthropic writer, "I have seen the labours of galley-slaves; but I have seen nothing like the slavery of a servant-of-all-work in a London lodging-house!"

DEATHS IN CHILDBIRTH.

In the four years, the returns under this head were less specific than could be desired.

The annexed return of some cases occurring in the metropolis will, however, give a general idea of the nature of the accidents that render childbirth dangerous.

Of 196 cases noted, 55 were returned simply as "childbirth;" 7 "miscarriages," two of the latter attended by hæmorrhage; 27 "flooding," or loss of blood; 6 rupture of the uterus; 63 puerperal fever, peritonitis, or inflammation of the womb; 1 erysipelas; 1 inflammation of brain, 1 of heart, 4 of lungs; 3 phlegmasia dolens; 1 serous effusion after childbirth; 14 exhaustion, collapse, syncope, debility; 2 convulsions; 5 puerperal mania; 1 difficult labour; 1 exhaustion from a fibrous tumor in the uterus; 1 tubercles in the womb after childbirth; 1 ovarian dropsy after premature parturition; 1 dropsy and childbirth.

Original malformation renders labour in some cases difficult and dangerous; at other times pregnancy occurs in women afflicted with fatal diseases (fibrous tumor, tubercles, ovarian dropsy); and, as childbearing does not exempt the frame from disease, all the deaths which occur in that state, spontaneously or from accident, must not be ascribed to it in any other way than as a complication. Small-pox is almost invariably fatal in the puerperal state; and if inflammations of the brain, heart, and lungs, occur, their danger must be increased; but it is probable that the above cases were some of the many complications of "puerperal fever."

The terms—puerperal fever, puerperal peritonitis, uterine phlebitis, inflammation of the uterus—are applied by writers, without any great discrimination, to modifications of one affection, which it was proposed, in the nosology, to designate "metria," the uterus and its appendages being the source and principal seat of the malady; which has, however, no more in common with pure inflammations, like peritonitis, than the changes of the glands of Peyer in typhus. Metria is contagious; but this fatal disease, with phegmasia dolens and puerperal mania, will probably be regulated, to a certain extent, by the same causes as diseases of the first class. Another large section of the mortality is from the loss of blood, rupture of the uterus, or mechanical causes, and must very much depend upon the skill and care of the persons in attendance.

A certain number of deaths are caused every year by the contagion of puerperal fever, communicated by the nurses and medical attendants; but this will be referred to shortly.

Midwifery is well understood in England, and the medical practice is certainly as sound, as little encumbered with obsolete prejudices, as well adapted to aid and correct the efforts of nature, as the other parts of surgery; but errors in practice are sometimes committed; and though excellent nurses, considering their education, are sometimes met with, medical precepts are too often set at nought by the nurses and old women in attendance, who have peculiar views of their own, which they lose no opportunity in announcing and carrying into effect, with the best intentions in the world, but the worst consequences. A large proportion of the 500,000 English women who lie in every year, and have any attendance at all, are attended by midwives, who, from one cause or other, probably delicacy of the national manners in points of this kind, receive no regular preliminary instruction in anatomy and other matters, some knowledge of which a glance at the causes of death in childbirth will show is indispensable in many emergencies. It is true that a medical man can be called in where the danger is imminent; but, to discover danger, knowledge is required; and those who have come in contact with midwives, or "monthly nurses," are well aware that ignorance does not diminish their self-confidence. In France, the "sages-femmes" go through a regular course of instruction, theoretical and practical. Madame Boivin and others have greatly distinguished themselves there by their writings, and contributed not a little to the progress of their art. Mr. Hoffman states that the Prussian Government supported, in each of the eight provinces, schools of midwifery, which in 1837, had furnished the country with 11,155 midwives, examined and passed by the Medical Boards.

It would be folly—with the undoubted differences in our manners and institutions—to argue that the French or Prussian systems should be introduced into this country; practically they are perhaps not more efficient than our own; but it is very well worth while, in the first place, to inquire whether our English system do not admit of essential improvements, and in the second, what steps should be taken for carrying these improvements into effect.

No one who has reflected upon the subject, and certainly no one who has a practical acquaintance with it, will contend that the annual deaths of 3000 women in childbirth, and of 13,350 boys, and 9740 girls in the first month after delivery, or the sufferings and deformity of those who escape with life, are natural and inevitable. Admit that the lives of a thousand—of five hundred—or of one hundred of these mothers could be saved—and that many more might be rescued from injuries and pains which disable, or never leave them, and assuredly no apathy, no false sentiments of delicacy, will prevent those who have the public health at heart from giving the subject the most attentive consideration.

If schools for the education of nurses and midwives were established in the metropolis, and the large towns, under medical supervision, and some distinction were conferred upon those who proved attentive, kind, and skilful, such schools would probably be frequented. A highly useful profession would be thrown open to women, who have now so few sources of profitable employment; and the utility to the community, of a recognised body of respectable women, educated as nurses, acquainted with the plain doctrines laid down in the popular medical works on health, and possessing as much knowledge of midwifery as the French *sage-femme*, would be incalculable. Some of these schools might be connected with the present hospitals and lying-in institutions; others might be founded for the delivery of easy popular lectures, and for providing the wives of the indigent with gratuitous attendance, or attendance slightly remunerated—to be supplied by the young nurses, superintended by those practically versed in their art, and medical officers.

In a year, or two years, intelligent women would acquire, at such an institution, sufficient information and skill to be useful nurses. It is questionable whether they should be taught the properties of drugs. I do not think that they should be allowed to dabble in such dangerous articles. If they were taught in what circumstances to give a few drops of laudanum after delivery, and when to administer castor-oil, or tincture of rhubarb themselves, or in what way to apply the remedies prescribed by physicians or surgeons, it would be enough. To attempt more would be to establish a new class of half-educated practitioners, like the druggists, and would infallibly lead to mischief, without any chance or prospect of countervailing good.

After consulting on the subject several medical men in extensive practice, I may state that the want of good, educated, trustworthy nurses is felt in the highest circles, as well as in the middle ranks of society. The nurse is always present with the patient; the medical man only occasionally; to the nurse is intrusted the administration of remedies, the ventilation of the apartment, the warming, the diet, and a thousand nameless offices on which health and life depend. How can a nurse without any knowledge of principles—without sound convictions engrafted on her mind by education—swayed by her feelings and traditional prejudices, be

expected to discharge her difficult duty? The nurses of our hospitals acquire a practical knowledge of their art, and get employment out of doors; but, as a general rule, hospital nurses are under-paid, and the consequence is that they are too often a very inferior class of women, who can get no other engagement. There are exceptions, but as our religion has not yet called into existence a class like the *sœurs de charité*, it is vain to expect nurses to supply their place, unless the wages (they should be salaries) be sufficient to supply educated persons with a comfortable subsistence.

An institution for the education of nurses would probably succeed better than many of the medical schools; but they would be nurses for the middle and higher classes; the small outlay of capital which an education of the kind would involve, must tend very much to preclude the admission of midwives for the poor labourer's or the artisan's wife. To provide these the professional education should probably be at first gratuitous; or a few professorships might be endowed, and the fees be made low for all the instruction in the doctrines of health, and the principles and practice of midwifery, including nursing in sickness of every kind. The appointment of parish nurses and midwives under the medical officer, could alone provide for paupers; but the labourer or artisan would find the attendance of the nurses, who had availed themselves of the moderate education adverted to above, of great use in the sickness of his wife, and really less costly than the spirit-drinking nurses now met with, who sometimes demoralize the mother, and poison his children.

Several collateral advantages would arise from the institution and support of a class of educated nurses distributed all over the kingdom.

New habits and practices are much slower in their progress than opinions and knowlede; they require to be taught "in season and out of season"—by precept and example. Our present knowledge of the laws of health—of the causes of death, and consequently of the means of preserving health—is imperfect, no doubt, but is very far in advance of what was possessed in the last century. The popular works of Dr. Southwood Smith, Dr. Andrew Combe, Mr. Pye Chavasse, Dr. Hodgkin, and others, place within the reach of the public important doctrines which were unknown to Sydenham. Such popular medical literature has an extensive sale; but it would be a mistake to suppose that the mass of population, rich or poor, is acquainted with the best established sanatory principles, and the reasons on which those principles rest,—is therefore much influenced by them, or is willing to take the trouble and incur the expence requisite for procuring what science and calculation prove are necessaries of life. The practice of no small part of the population in sanatory matters, so far as it can be referred to rules, and is regulated by doctrines, is the practice inculcated by former generations of medical men; and is only broken in upon by a few rays of light. The well-informed part of the community owe their enlightenment principally to the teaching of their medical attendants, who lose no apt opportunity of laying down rules of health, and enforcing them, by drawing the attention of families to the sad and often striking consequences of neglect. This is the more praiseworthy in the members of the medical profession, considered as individuals, inasmuch as the colleges do not prescribe, nor the schools provide, as in other counteries, any systematic courses of instruction in hygiology (the *hygiène* of the French). The art of preserving health is not yet taught in the medical schools of England; and it is only just to add that it is not paid for in any shape by the public.

It is nevertheless to the medical profession chiefly that we look for the sound doctrines of hygiology, and to their due influence in the homes and daily life of families. But would not the medical man be as much assisted by instructed, as his proposals are thwarted by ignorant, nurses? Would not the constant reasoning, the stories, the advice, of an amiable woman—comparatively well instructed in her *profession*—go further than anything else to inform the minds and to impart practical principles to the mothers of families? And who does not know that the comfort and cleanliness of the poor man's hearth, the lightsomeness and health of his room, the vigour and training of his children, are the work almost entirely of the wife. If the educated nurses possessed the sound common sense and good nature which a body of English women scarcely ever wants, and could be induced to read so as to keep up their knowledge, and to apply practically the improvements which every day brings to light, they would be a connecting link between the highest class of intelligences engaged in medical research, and the humblest members of the community to whose advantage those researches invariably tend. The English midwife would then be orthy fore reward."—*From the Registrar General's Report.*

THE METHOD TO BE ADOPTED FOR OBSERVING THE CIRCULATION OF THE EMBRYO OF A FOWL.

When we succeed in preparing an embryo of from 30 to 40 hours, and in detaching it and extending without injury under water upon a slip of glass, and submitting it to the plate of a simple microscope, we observe at one time the whole vascularities and circulatory circles from the heart, which we see contracting and propelling the blood into the aorta, even to the extremities of the arterial divisions, from which the blood passes into the venous radicles, and from those radicles even to the larger veins by which it returns to the heart. It is only by a low magnifying power that we can observe the whole of this phenomenon at one time; but a magnifying power of about 100 linear is necessary in order to be able to examine the details.

When we wish to examine the embryo at different periods, it is necessary to separate the white, and carefully place the yelk in a small cup; this cup or glass capsule is to be placed in a vessel nearly filled with warm water; and if the germ is developed, we shall recognize the extent and capacity of the *cicatricula*. Then cut the membrane around the *cicatricula* circularly by the aid of a pair of fine scissars, and then detach the *cicatricula* by raising it carefully, and by drawing it delicately by means of a mounted needle; shortly it floats on the water, and after having taken out the little capsule with the yelk to disengage it from a part of the adhering yellow matter which interferes with its transparency, it becomes very easy to receive the floating and membranous *cicatricula* upon a slip of glass surrounded with water (a little cell covered with the thin glass would be better), where may be observed the phenomenon above alluded to. —*London Physiological Journal.*

TRACHEOTOMY IN THE LAST STAGE OF CROUP.

At the sitting of the Academy of Sciences on the 8th of January, M. Scoutetten, Professor at the military hospital of instruction at Strasburgh, read a case of tracheotomy performed with success in the last stage of croup. He performed the operation on his own daughter, an infant six weeks old, to save her from imminent death.

The operation was successful. According to M. Scoutetten, it is the only instance of tracheotomy performed on account of croup on an infant of this age; and the only one in which such alarming symptoms lasted so long. He is of opinion that this case ought to encourage the timid, and show the surprising resources of nature at this tender age.

MM. Roux, Breschet, and Serres were appointed to report upon the case.—*Gazette Médicale*, Jan. 13, 1844.

COLLEGE OF SURGEONS.

To the Editor of the Medical Gazette.

Sir,

In the selection of names to receive the honour of the Fellowship, the Council has been most properly regardful of those who, although resident in the provinces, have taken a respectable local position in our profession.

The grand and safe principle by which they appear to have been guided is that of thus honourably marking those whose names appear as the medical officers of our provincial hospitals, taking such a position as the guarantee of local professional standing.

The main reason, and a most efficient one it is, for the institution of this new chirurgical rank, would appear to be that of exciting to the acquirement of a higher professional standard.

To the general excellence of the arrangements I must bring to your notice one most singular exception, viz. the absence from the list of every medical officer in the East India Company's service, with only two exceptions, and those in the persons of gentlemen who have retired from the east.

Surely, Sir, measured by the test which the Council has laid down, the officers of the general hospitals of the three presidencies, gentlemen filling the position of pure surgeons, and totally disconnected with pharmacy, might be deemed at least as worthy of the honour as many general practitioners attached to much inferior institutions, and with names perhaps still less known to fame, who have received it.

I have been told that the former, from their distant residence, cannot fulfil their duty as electors; but I maintain that the same difficulty will exist to a certain extent with the latter. Moreover, the chief object in forming this new grade is to confer rank, and encourage high attainments—the elective franchise is surely but a secondary object.

I trust, Sir, most anxiously, that in the forthcoming "batch," this serious injustice may be remedied as far as may be.

I am, sir,
Your obedient servant,
A Bengal Medical Officer.

Feb. 26, 1844.

OF THE

ACCIDENTS BROUGHT TO THE LONDON HOSPITAL

DURING THE YEAR 1843, AND COMPARED WITH THAT OF THE YEAR 1842.

	No.		No.		No.
Admitted as in-patients	2173	In-patients—Male	1597	Out-patients—Male	2386
Treated as out-patients	3493	Female	576	Female	1107
Total during the year	5666	Total in-patients	2173	Total out-patients	3493

CONSISTING OF THE FOLLOWING CASES.

	No.	IN-PATIENTS.			OUT-PATIENTS.		
		Male.	Female.	Total.	Male.	Female.	Total.
* Fractures	899	366	115	481	290	128	418
Wounds	1036	284	60	344	521	171	692
Contusions	2122	470	195	665	981	476	1457
Sprains	592	137	39	176	255	161	416
Burns and scalds	327	96	77	173	85	69	154
Dislocations	111	33	5	38	56	17	73
Hernia	65	30	16	46	14	5	19
Bites of dogs	52	9	..	9	29	14	43
Concussions	48	39	9	48	..	..	..
Attempts at suicide	46	20	26	46	..	..	..
† Various	368	113	34	147	155	66	221
Total during the year 1843	5666	1597	576	2173	2386	1107	3493
" " 1842	5503	1273	510	1783	2522	1198	3720
More	163	324	66	390	..	..	..
Less	..	..	..	..	136	91	227

† Including 107 cases of Retention.

* THE FRACTURES

Consisted of the following Cases:—

	In-patients.	Out-patients.	Total.
Skull	14	..	14
Face	14	4	18
Spine	4	..	4
Ribs	115	42	157
Pelvis	5	..	5
Thigh	56	4	60
Patella	14	1	15
Leg	150	6	156
Foot	24	2	26
Shoulder-bone	5	10	15
Collar-bone	12	104	116
Arm	32	52	84
Fore arm	18	138	156
Hand	18	55	73
Total	481	418	899

REPORT OF THE 2173 IN-PATIENTS.

	Discharged cured.	Died.	Remain in hospital.	Total.
Fractures	429	24	28	481
Wounds	325	12	7	344
Contusions	651	11	3	665
Sprains	175	..	1	176
Burns and scalds	133	31	9	173
Dislocations	36	1	1	38
Hernia	39	7	..	46
Bites of dogs	8	..	1	9
Concussions	44	3	1	48
Attempts at suicide	43	3	..	46
Various	136	5	6	147
Total	2019	†97	57	2173

† Of this number, 38 died within 24 hours after admission; 64 within one week.

London Hospital, 19th January, 1844.

A HANDSOME FEE.

The father of Frederick the Great, of Prussia, "when his son had the small-pox, in great alarm despatched a messenger to Ellert, his physician. When the latter arrived, and relieved him from his anxiety about the state of the child, his Majesty, as a speclal token of his royal gratitude, and to compensate the Doctor for his attendance, ordered that he should be supplied, during his residence at the palace, with two bottles of Duckstein beer a day, and a dinner that was not to cost more than six groschen, or ninepence of our money."—*Campbell's Life of Frederick the Great.*

MODE OF EXTRACTING CALCULI FROM THE BLADDER.

The following method of taking calculi from the bladder, without operation, is adopted by Dr. Aberle, at Reidlingen on the Danube (Wurtemberg), where gravel amongst children from one to four years of age is frequent. Dr. Aberle's treatment consists in relaxing the circular fibres of the bladder, which cross the external longitudinal or detrusive fibres, and gradually thicken as they approach the neck, and form the sphincter of the bladder. In the first case a calculus the size of a large pea was detected with a sound. An emulsion of hempseed, with extract of henbane, was given internally, and an ointment of belladonna rubbed on the perineum. Eight hours afterwards a calculus got into the urethra, and was expelled spontaneously. Fifteen other children, under the same treatment, have passed calculi in from 18 to 36 hours. The paralysis of the bladder lasted but a short time.—*Algemeine Zeitung für Chirurgie*, &c. published by Dr. Rohatzsch.

EXTEMPORANEOUS VESICANT.

By Dr. Barcq.

Into a flat glass, pour from 8 to 10 drops of very concentrated ammonia; cover the liquid with a large piece of linen on a rather less diameter than that of the glass, and slowly apply this little apparatus to the previously shaved skin. Keep the whole in its place by means of moderate pressure with the fingers.

As soon as a red ring, about 2 centimetres in breadth, is observed round the glass, it is certain that vesication is effected. Sometimes scarcely 30 seconds are necessary for obtaining this result. It remains only to remove the apparatus, to wash the part, and to tear away with a pair of nippers the epidermis, which comes off easily and in one piece.

The dressing is according to the object in view,—to the indications of the endermic method, for example.—*Bulletin de Thérapeutique;* and *The Chemist.*

OBITUARY.

(From a Correspondent.)

"On the 14th ult. at his residence, Cheetham Hill, William Goodlad, Esq. Fellow of the Royal College of Surgeons, and one of the Surgeons to the Union Hospital, Manchester."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, Feb. 23, 1844.

J. M. S. Fogo.—W. D. Key.—G. Fitzhenry.—G. Simpson.—J. Coulter.—J. W. Collingwood.—W. H. Pope.—A. W. Rowlands.—J. Heeley.—J. M. Goodinge.—T. O'Connor.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, February 22, 1844.

A. H. Godby, Dublin.—C. H. Kingdon, Exeter.—W. R. James, Islington, London.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, February 17, 1844.

Dropsy, Cancer, and other Diseases of Uncertain Seat	104
Diseases of the Brain, Nerves, and Senses	154
Diseases of the Lungs and other Organs of Respiration	448
Diseases of the Heart and Blood-vessels	32
Diseases of the Stomach, Liver, and other Organs of Digestion	63
Diseases of the Kidneys, &c.	0
Childbed	6
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	6
Arthritis	1
Rheumatism	3
Diseases of Joints, &c.	1
Carbuncle	1
Phlegmon	0
Ulcer	1
Fistula	8
Diseases of Skin, &c.	0
Old Age or Natural Decay	88
Deaths by Violence, Privation, or Intemperance	28
Small Pox	28
Measles	28
Scarlatina	43
Hooping Cough	37
Croup	6
Thrush	1
Diarrhœa	8
Dysentery	2
Cholera	0
Influenza	9
Ague	0
Remittent Fever	1
Typhus	40
Erysipelas	2
Syphilis	1
Hydrophobia	0
Causes not specified	3
Deaths from all Causes	1146

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, MARCH 8, 1844.

ON DISEASES ARISING FROM THE DEFECTIVE EXPANSION OF THE LUNGS IN EARLY YOUTH;

Being the Gulstonian Lectures at the Royal College of Physicians, delivered

By George Hilaro Barlow, M.D.
Fellow of the College, and one of the Physicians of Guy's Hospital.

2.—The second class of cases, in the first division of my subject, includes those in which the defective expansion of the lungs arises from some mechanical pressure exercised either upon them or the air-passages.

Thus, a young man, aged 25, was admitted into Guy's Hospital, under the care of Dr. Bright, who had been afflicted with hump-back since his seventh year. His symptoms during the time he was in the house were urgent dyspnœa, orthopnœa, general venous congestion, and great drowsiness. He died rather suddenly, just after leaving the water-closet.

When the body was inspected, there seemed to be scarcely any neck; and the upper opening of the chest was very much contracted. There was a great projection forward of the first dorsal vertebra.

There were some ounces of water in the pericardium, and several in the right pleura. The heart was large and blunt; the right side much dilated; ventricle thick and firm, and containing a cystiform clot. The tricuspid opening wide, and the curtains of the valve unequally thickened, so as to allow reflux. The left side was rather diminished in capacity and substance, though still strong, especially the auricle (a small oblique opening existing between the auricles). The aorta was small: the pulmonary artery large, and its lining coarse.

The trachea just above its termination was flattened posteriorly on the left side against the vertebræ.

The lungs were of moderate size, and though fleshy and tough, yet crepitant throughout, and in part emphysematous; there was some pasty matter in some of the tubes.

The liver, dark, indurated, and myristicated.

The chain of causation in this and similar cases being nearly if not altogether the same as in those of the preceding class, need not detain us; the only difference being that here the origin of the mischief is to be found in the mechanical compression exercised upon the trachea by the projection of the vertebra, and perhaps in some measure by that upon the lungs, by the abnormal form of the walls of the chest; the effect, however, of this defective expansion remaining the same as in the former instance. I would, however, in passing, express my belief that such cases are comparatively rare, for on searching the ample records of our museum at Guy's Hospital I have found it difficult to meet with an unexceptionable instance.

There is, however, another source of contraction of the chest, of more common occurrence,—I mean that produced by false membrane effused in pleuritis. Now when the diminution of the cavity of the chest arising from this cause is considerable, or when the effusion of false membrane has occurred on both sides, we should expect that, the expansion of the lungs being impeded, the same train of consequences would ensue as has been described when speaking of the first class of cases.

It may, however, happen, where the contraction exists only on one side, that the opposite lung expands, and is called into compensatory activity. In such a case, the evils which have been just enumerated are avoided; but there is great danger, especially if there exist any tendency to tubercular disease, lest such disease should develope itself in the lung which is become thus over active; for, as I shall hereafter endeavour to prove, a part where functional activity is increased is more particularly liable to become the seat of tu-

bercular disease. I need hardly observe that in either case the danger must be greatly increased where the growth is not completed; and, therefore, that the effusion of false membrane on the surface of the pleura is a far more formidable evil in the growing subject than in the adult.

3. The third class, in the first division of my subject, includes a set of cases the true nature of which seems to me to have hitherto escaped the notice of pathologists; those, namely, in which the obstruction to the circulation on the right side of the heart is the result of *pericardltis acting mediately through the impediment which it offers to the respiratory movements.*

Few persons can, I think, have frequently and carefully observed the position and respiration of patients affected with pericarditis, without noticing the general difficulty with which they breathe, and especially the very great inconvenience which they appear to suffer from the descent of the diaphragm. Now, if this state of things should continue for a long time, in a person whose growth is not yet completed, it is evident that the obstruction thus opposed to the exercise of the lungs must impede their development, and thus give rise to the circulation on the right side of the heart, and its consequent evils.

The mode in which this is brought about will, I think, be made more apparent by the following case.

Jane Gompertz, aged 17, of rather short stature, became my patient at the Surrey Dispensary in June 1837. Her health, I was informed, had been good till her twelfth year. About six months afterwards she suffered from severe pain in her joints, which was followed by swelling, followed by palpitation. From her twelfth year she was very short-breathed.

When I first saw her, there were considerable livor, orthopnœa, ascites, and œdema, affecting principally the lower extremities. She passed the whole of the day and the greater part of the night leaning forwards in a chair, with her elbows resting upon a table.

June 28, 1837, I made the following note. A loud bellows sound accompanies the first stroke, and is most distinctly heard on the left of the mamma, nearly under the axilla; there is also a rough diastolic sound (a friction sound?); heart's impulse widely diffused; fulness of præcordial region; pulse 120, small; urine scanty, highly coloured, not albuminous.

She was much relieved by purgatives and diuretics, sometimes combined with mercurials and small doses of digitalis; and the bellows sound in a great measure disappeared, but could be produced by directing the patient to hold her breath for a few seconds. She so far recovered as to be able to walk from the Borough to the upper part of Regent Street every morning, and back again in the evening, but was still short-breathed, and subject to palpitation upon exertion. I lost sight of her after her recovery, if it could be so called, till the summer of 1841, when she again became my patient at the Dispensary. She had in the interval grown somewhat in height, and become much stouter; the mammæ were fully, perhaps excessively developed; menstruation had also been established, and continued regular for a considerable period.

On the 16th of Sept. 1841, she was admitted into Guy's Hospital, under the care of my colleague Dr. Addison, when her condition was thus described by his clinical clerk, Mr. J. H. Browne.

"At the present time her breath on exertion is very short; she has occasional sickness, with slight cough, and frothy mucous expectoration, and orthopnœa; she has pain in the region of the heart and about the lower region of the right scapula, in both of which places there exists a considerable protuberance, from distortion of the thoracic parietes, which has been gradually increasing. Pulse is 84, irregular, small, and rather vibratory; the chest is very resonant on percussion, and respiration seems natural on auscultation, though rather sonorous. The action of the heart is loud, quick, and irregular; a loud and long *bruit de soufflet* accompanies the first sound, and is most distinct to the left of the left mamma; the second sound is indistinctly masked by the first. The impulse of the heart is greatly augmented and diffused. There is no œdema, but some engorgement of the liver, which is evident below the ribs. She has not menstruated for nine weeks, and at that period the flow was very scanty."

She obtained temporary relief, and left the hospital. She again became my patient, and improved so far as to be able to walk a mile and a half to see me, and back again. She soon relapsed, was again slightly relieved, but upon the whole, dyspnœa, œdema, and ascites, continued to gain ground, and she died on the 21st of May, at the age of 22; ten years from the commencement of her illness, and five from the time she first became my patient.

The body was partially examined by my friend Dr. Birkett, and myself, about sixty hours after death.

The heart generally was very large; there was extensive pericardial adhesion, some of which was cellular, and evidently very old. There was a thick white deposit, with some grains of ossific nature on the anterior surface of the right auricle. The auricle itself was large, thick, and distended, as was also the right ventricle. The auriculo-

ventricular opening on the same side was rather larger than natural (it readily admitted four fingers). The valve was healthy, though, when the ventricle was distended, it could not perfectly close the orifice. The pulmonary artery was very small; the valves beautifully perfect. On the left side, the pulmonary veins were small, the auricle thick and large, but in a much less degree than the right; the auriculo-ventricular opening small. The mitral valve healthy; the curtains were, indeed, rather small in reference to the ventricle, though by no means so in reference to the orifice. The ventricle was large and thick, though by no means so much so as the right; and the columnæ carneæ were very large. The lining membrane of the heart was healthy; in that of the aorta were some small spots of atheroma.

The lungs, where cut into, were tough and fleshy; the trachea just below the larynx would barely admit the little finger of a small hand. The measurement was judged by experienced anatomists to be that of a child from eleven to twelve years of age.

The liver was large, and much myristicated. One kidney was examined, and appeared of fair size, apparently rather congested.

Upon the principles which have been already laid down, the series of causation in this case appears to have been rheumatism; pericarditis, with some adhesion; impeded motion of the ribs and diaphragm; defective development of the lungs and air-passages; obstructed circulation through the lungs and right side of the heart; obstruction to the return of the blood through the venous auricles; enlargement of the liver; general dropsy; death.

Before proceeding to notice any other hypothesis upon which to account for the origin of the disease, I may, perhaps, be allowed briefly to describe another case, somewhat more complicated indeed than the last, since there were found traces of endocardial lesion, though slight: but which affords an apt illustration of the connection between pericardial disease occurring in early youth, and defective development of the lungs and air-passages, with hypertrophy of the heart.

Mary Ann D——, when about thirteen years old, was affected with severe illness, accompanied by much pain in the left side, and urgent dyspnœa, but, as far as could be learned from the statement of her parents, without any obvious rheumatic affection. During the last three years of her life she was frequently under my care, with pain in the region of the heart, palpitation, and dyspnœa. Her growth was not materially impeded, and her figure was well formed; excepting that the chest was rather small, and the spine curved backwards, so as to render her what is commonly called round-shouldered, but not to such a degree as to constitute a deformity. During the aggravations of the dyspnœa and palpitation, for which she became my patient, her legs were generally œdematous; and latterly there was much ascites, with evident enlargement of the liver. During the last three months of her life a harsh systolic murmur was observed over the situation of the base of the heart. The mammæ were moderately developed, but she had never menstruated.

Sectio cadaveris 48 *hours after death.*

The body was far advanced in decomposition, and we were allowed to make but a very hasty examination. There was universal adhesion of the pericardium, in parts by cellular, and in parts by more recent adventitious membrane: the oldest adhesions were situated posteriorly, and near the apex of the heart. The left auricle was large and thick: there was some sub-membranous deposit near and around the edge of the mitral orifice. The orifice itself was small: the curtains of the mitral valve slightly thickened and contracted. The columnæ carneæ were large, and the ventricle was capacious, its walls rather thick. The aortic orifice was narrow, and the valves pouched, as if too large for the opening: the aorta small, but its lining membrane healthy. The right auricle and ventricle were very large and thick; the latter much exceeding the left ventricle, both in size and capacity: the lining membrane and valves on the right side were healthy. The lungs were much congested, and some patches of pulmonary apoplexy were observed. The left bronchus was much compressed. The trachea was very small, being equal in size to that of a child of eleven or twelve years old. Liver much myristicated: much effusion into the peritoneal cavity, the membrane opaque. Kidneys healthy.

Now I am aware that it may be said—indeed I know that it has been said—that the hypertrophy of the heart is the immediate and necessary consequence of the pericardial adhesion, owing to the impediment afforded by the latter to the action of the heart. But, in the first place, it appears to me that such an assumption is altogether gratuitous; and further, that all analogy is opposed to the belief, that the impeding the action of a muscle by any mechanical restraint induces hypertrophy of that muscle; whereas we might find many instances in favour of the opinion that it is followed by the very opposite result. Indeed, I should *à priori* be as little disposed to anticipate hypertrophy in a heart contracted by peri-

cardial adhesions, as I should be to expect excessive development of the muscles of the leg and foot of a Chinese lady; and I may take occasion to shew that a heart so circumstanced is more in the predicament of such a foot than is commonly supposed; and secondly, that we have direct proof that extensive pericardial adhesions may exist, particularly where they have resulted from pericarditis occurring after the adult age, without producing any hypertrophy of the heart whatever.

[The lecturer here exhibited a complete ring of ossified pericardium which had surrounded the base of the heart in a patient of his, who had been the subject of rheumatic pericarditis twenty years before his death, and where the ossific deposit had taken place in the false membrane which formed the medium of adhesion between the two surfaces of the pericardium. The heart in this instance was not larger than natural, thus affording direct proof that adherent pericardium does not necessarily give rise to hypertrophy.]

So that, if the reasoning by which it has been endeavoured to shew that consequences similar to those observed in the two last cases will result from defective expansion of the lungs be correct; and if, too, as is, I think, evident, there is impeded respiration in persons affected with pericarditis, or adherent pericardium, we have here not only a *vera causa*, but also one capable of producing the effects assigned to it. Whereas, if we assume the adhesion of the pericardium as the direct or immediate cause of the hypertrophy of the heart, we shall indeed assign as a cause a fact of the existence of which there can be no doubt, but one which has been shewn to be inadequate to produce the effects ascribed to it.

In connection with the subject of the consequences of pericarditis upon the circulation in young persons, I may here mention another effect which, although it does not strictly belong to the class of cases which we are now considering, I am unwilling to pass over, as it affords a striking illustration of the effects of that disease in the young subject;—I mean, the arrest of the growth of the heart, and its consequent inability to maintain the circulation.

Thus, I recollect a young woman being admitted into Guy's Hospital a good deal emaciated, with very feeble pulse, and sloughing at the tip of the nose and extremities of some of the fingers and toes, she continued to lose strength, and was removed by her friends from the hospital. She died a few weeks afterwards, and I had an opportunity of examining the body. The lungs were free from tubercles, but there were extensive pleuritic adhesions, the pericardium also was universally adherent, and the heart, aorta, and orifices of the heart remarkably small, shewing that the adhesion of the pericardium is far from causing hypertrophy, but the opposite effect, as it prevented the growth of the heart and rendered it unable to maintain the circulation.

ON

DIFFERENT FORMS OF GRANULAR DISEASE OF THE KIDNEY.

By J. D. Heaton, M.D.

[Continued from page 715.]

(For the London Medical Gazette.)

Mary Chappel, age 48, admitted April 28, 1841, under Dr. Thomson, unmarried, middle stature, sallow complexion. Has been in service as a cook in a private family; of temperate habits.

Two years ago she had a fall, and struck herself severely in the left lumbar region. Since then, she has never enjoyed good health. Last August, she was affected with ascites; she was admitted into the Middlesex Hospital, and in six weeks discharged, cured of the dropsy. In less than a fortnight, however, she says, she was attacked with inflammation of the liver, and again became dropsical. The liver complaint was subdued under medical treatment, and the dropsy reduced, but her body still remained large. Since then she has been following her usual employment, but has not been in good health; she has suffered from debility, pain shooting down the thighs, and a sensation of bearing down. There has been no menstrual discharge for ten years.

Of late, the amount of fluid in the abdomen has increased so much that she has been quite unable to walk about or attend to her employment. At the time of her admission, the abdomen is much distended, and presents distinct fluctuation; but there is no œdema of the legs or other parts. She has not much pain, except an uneasy sensation of bearing down, and pain shooting down the thighs; there is slight tenderness of the abdomen. The tongue is furred; appetite poor; bowels costive; stools pale. She is subject to headache. She is free from cough or dyspnœa. Sometimes has attacks of palpitation, not violent, nor very frequent. No physical signs of disease connected with the lungs or heart. Pulse of moderate frequency; feeble, rather sharp. Urine very scanty, not amounting to more than half a pint in the 24 hours; clear, but high coloured. Unfortunately its chemical properties were not examined.

℞ Elaterii, gr. j.; Ext. Gentian. ʒss.
M. ft. pil. vj. sumatur j. omni 6tâ horâ.
℞ Ferri Potas. Tart. gr. v.; Liquor.

Potas. ℿxx.; Infus. Columbæ, ℨiss. M. ft. haust inter sing. dos. mist. sumendus.

By the 30th, the effect of these remedies had shown itself by considerably reducing the amount of fluid in the abdomen.

It was now ascertained that there was a large tumor in the left iliac, extending into the hypogastric region; it was distinctly felt to have a lobulated form, and to possess considerable firmness; it was painful when pressed. The next day, there was so much pain in the situation of this tumor, as to require the application of 10 leeches, which gave much relief.

It is unnecessary to go through the history of this case, which is rather long, and presents little variation. The treatment was principally directed to promote the action of the liver, and to remove the fluid in the abdomen by various purgatives of an hydragogue character. The urine throughout was very scanty, but, unfortunately, was not made the subject of any particular examination. Her health was rather improved for some time, and she was able to sit up, and take a little exercise in the ward. For some weeks before her death, however, she became more dropsical, and was confined to her bed by great debility. There was not, at any time, any dropsy of the cellular tissue of the legs or other parts. The urine became still more reduced in quantity; the skin was hot and dry; tongue dark brown, and adhesive.

On the 21st of June, the abdomen was fully distended with fluid, painful, and extremely tender. The face was now pale and contracted, having a cadaveric expression. Respiration gasping. Tongue brown and quite dry. Teeth covered with black sordes. Pulse feeble, and very frequent. Bowels confined. Urine quite suppressed. During the night vomiting supervened; she died the next morning, remaining sensible to the last.

Inspectio cadaveris, post mortem horas 38.

The body much emaciated; abdomen distended and fluctuating; no dropsy of the cellular tissue. The uterus much prolapsed, which was not known previously; a reducible femoral hernia existed on the left side, which she had mentioned during life, and for which she had worn a truss for some time.

Thorax.—A small quantity of serum in the right cavity of the pleura. A few old inflammatory adhesions between the two layers of the pleura posteriorly on each side. The surfaces of the pleura on each side extensively covered with recent lymph of a bad character, being soft, semi-opaque, and apparently incapable of perfect organization; in some parts granulated; in others spread evenly over the surface. The lungs were not much diseased; a few miliary granulations were scattered through each in small groups. Near the apex of the right lung was a small dense mass, around which the surface was puckered and irregular. In different parts, lying superficially under the serous membrane, were small masses of cretaceous matter, rather smaller than a pea. The heart was rather pale and flabby, but appeared free from disease. It weighed 9 oz. 2 dr.

Abdomen.—The peritoneal sac contained a large quantity of clear yellow serum. When the contents of the abdomen were fully exposed, the intestines were observed to be pushed upwards, and to the right side, by a large tumor occupying the left iliac region, extending inwards to the median line, and upwards of an inch above the umbilicus.

It was free anteriorly and laterally; posteriorly, it was attached to the uterus, rectum, small intestines, and posterior walls of the abdomen. The tumor was larger than a man's head; when separated, it weighed 7 pounds 3 ounces. It was evidently a multilocular cystic degeneration of the left ovary. It consisted of innumerable cysts of every variety of size, from that of a large orange down to that of a mustard seed. The larger ones had thickened opaque walls, in which were formed numerous smaller cysts; they contained a curdy-grey fluid of a very bad smell, amongst which were films of an opaque white substance, having a somewhat iridescent lustre, and presenting much the appearance of boiled fish-skin. The smaller cysts were semi-transparent, and contained a clear serum*. The intestines had a dark, greenish colour, but without much appearance of vascularity.

The peritoneum was thickened and opaque. The whole of the surface was studded with granulations, varying in size and number in different parts; on the mesentery, they were small and very numerous; over the liver, and on the tumor, they were larger and more irregularly scattered. They were mostly semi-transparent, of a rather firm consistence, and could be removed from the serous membrane without causing any laceration of its surface. Some of them were globular, and attached by a short stalk. Over the liver were some shreds of soft, opaque lymph, which, when held up to the light, presented numerous granules in their substance. The liver was small; it had a pale colour, but, further than this, presented no morbid appearance.

Kidneys.—The right kidney was small; it had a faded, yellowish grey colour, and felt very soft and flabby. In removing the capsule, the cortical structure was so soft and adherent as to tear off with it in irregular patches. The surface was irregular and coarsely granulated. On laying it open, the same colour and diminution of cohesion were found to pervade both the cortical and

* A model of the ovarian tumor is preserved in the museum of University College.

tubular part. The apices of the papillæ had more redness, and appeared less diseased, than the rest of the tubular structure. No red points, nor other traces of vascularity, were perceptible. This kidney weighed $3\frac{1}{2}$ oz. The left kidney was also granulated; it was larger, and still softer than the right, so that it was impossible to separate the capsule without removing a large portion of the cortical structure along with it. It was much elongated, and had a more irregular surface than the right kidney, but its internal surface was very similar. It weighed $4\frac{1}{4}$ oz. The uterus was of the natural size when not impregnated. It did not appear itself diseased; but there was a morbid structure formed in the cellular tissue between this and the rectum, consisting of irregular masses of a cartilaginous hardness, semi-transparent, and of a greyish colour. Amongst these masses was a small cyst of the size of a filbert, containing a brown matter of a smooth, pasty consistence, and having a faint, feculent odour. It had no communication with the rectum, which, as well as the cyst, seemed quite entire.

No morbid appearances were discovered in the brain.

The above report is deficient in some observations which it would have been desirable to make during the progress of the disease. Had the post-mortem examination not taken place, the disease of the kidneys would not have been suspected. It seems not improbable, however, that this disease originated with the blow on the loins two years ago. The dropsy was confined to the sac of the peritoneum, and it is the absence of any cellular effusion (which is so usual a symptom in connection with albuminous urine), to which must be attributed the neglect of an examination of the urine and the state of the kidneys during life. No mention is made, in the previous history of the case, of this kind of dropsy having existed at any former period, nor of any other symptom distinctly referrible to the kidneys. This is remarkable, as dropsy is one of the symptoms the most frequently present, of those not *essential* to the disease; and where dropsy does exist in connection with granular degeneration of the kidneys, it is almost invariably anasarca affecting the limbs and face; the effusion into the serous sacs either occurring only at a very late period in the disease, or being dependent on some organic disease of other organs. As, in this case, the diseased state of the peritoneum itself is sufficient to explain the effusion from its surface, it appears probable that this effusion might not be, in any degree, due to the coexisting disease of the kidneys, and that this was one of those more uncommon instances where these organs proceed to an advanced stage of degeneration, without producing the symptom of dropsy — cases which, though rare, do sometimes present themselves. Allowing the ascites to be independent of the disease of the kidneys, it seems not impossible that it acted derivatively, and served to prevent the dropsy of the extremities.

The ascites seemed to have depended on the tubercular inflammation of the peritoneum. The liver presented no such appearance of disease as to lead to any certain opinion that the dropsy depended on obstruction to the circulation through this organ. The peritoneal inflammation presented all the gradations between shreds of bad lymph and the rounded tubercles of a still lower organization; some in the state of cartilaginous hardness and transparency, analogous to miliary granulations; and others passing into the opaque and softer state of crude tubercle. All were rounded and prominent, for the accompanying ascites had borne off the pressure of adjacent parts which might otherwise have flattened them. The serum was quite transparent, having none of the opacity and semi-purulent appearance common in the effusions of tubercular inflammation.

The appearance of the kidneys differed considerably from that described in most of the preceding cases; this difference consisting principally in the great softness and fragility of their substance; whereas, induration, though frequently combined with friability, is the more usual condition where the kidney has assumed a distinctly granular appearance, and already undergone some contraction. The disease appeared to invade extensively the tubular as well as the cortical structure, and no doubt the function of the kidneys must have been much interfered with. For the last two days of the patient's existence no urine was excreted from the bladder, and the discharge had been very scanty for some time. There was, however, none of the oppression of the faculties, and gradually invading coma, which usually presents itself where suppression of urine accompanies the fatal event.

The disease of the ovary presented the usual appearances of multilocular ovarian tumor. The pellicles spoken of as contained in some of the cysts, were analysed, and found to consist principally of cholesterine.

The morbid growth between the uterus and rectum appeared to be of the nature of scirrhus. It was remarkable that it should have become so extensive without producing more marked symptoms during life than an uneasy sensation of bearing down, the only one of which the patient complained having reference to this morbid appearance. It is singular, also, that, situated so near to, and even in contact with the uterus, an organ

so prone to disease of this nature, it should still have remained free from contagion. The pasty substance contained within the cyst much resembled fæcal matter, and may perhaps have escaped from the rectum through a perforation the result of ulceration or other injury, where the absence of peritoneum obviated the danger of serious peritonitis, but where, having no means of escape, it had become inclosed in a membranous cyst; and it is possible that the irritation caused by this foreign body may have been the original cause of the morbid structure by which it was surrounded.

The recent inflammation of the pleura was of that sub-acute character which I have, in previous cases, remarked to occur frequently in the last stage preceding death, in connection with granular degeneration of the kidneys.

CONTRIBUTIONS

TO

ANATOMY AND PHYSIOLOGY.

By Robert Knox, M.D. F.R.S.E.

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[Continued from page 720.]

ON THE CORPUS LUTEUM.

No. 7.—*Uterus precisely similar.*

Right ovary small. No corpus luteum externally. Numerous Graafian vesicles, some of considerable size. The ovary being cut directly across about its middle, two minute yellow bodies may be seen near that portion of the ovary where the corpora lutea are usually placed.

Left ovary. Abundance of Graafian vesicles. One large corpus luteum, and a smaller, equalling the one just described; it presents a tolerably distinct central cavity, although there was no appearance of a hole on the surface: each of these corpora lutea measures in diameter about four lines. The most projecting part of the largest presents no opening; and on slicing with great care we find no canal or cavity in the interior. The other corpus luteum (smaller) is still large on cutting into it.

No. 8.—*Uterus and Ovaria in every respect similar to the preceding.*

We have already remarked, that it was admitted that some of these twelve gimmers whose uteri had been sent us might be gravid: upon a superficial view of the whole, three of them were so evidently larger, and to the touch so clearly seemed to contain some foreign body, that they were examined separately and last, and gave the following results:—

No. 9.—Uterus weighs 12 oz.; length from os uteri to fundus, 5 inches 6 lines; weight of fœtus in right horn, 60 grains; weight of fœtus in left horn, 40 grains.

Dissection.

Upon opening up this uterus a fœtus was found in each horn, whose weight we have prefixed.

Ovaria present a corpus luteum in each.

Right ovary presents upon its surface the usual appearance of Graafian vesicles (?). And on a vertical incision being made of the whole organ, the same vascularity appears as has been noted in the preceding cases in reference to the corpus luteum. The whole ovary is more vascular than in any of the unimpregnated ones. There is an appearance of a central cavity, but no opening or short canal leading to it. Here, as in several other ovaria, on examining the external surface of the vesicles (Graafian?), which adjoin the corpora lutea, it is easy to see a great vascularity upon the surface of these vessels whilst distended with their contained fluid, and there is one now before us (about two lines in diameter), the exterior surface of which, and closely adjoining the corpus luteum just described, is exceedingly vascular, but otherwise has no connection whatever with the corpus luteum, except its close proximity.

Left ovary resembles the right one.

No. 10.—*Uterus contains a lamb in each horn, and bears the strongest possible resemblance to* No. 9.

Right ovary large. Corpus luteum fully formed in the usual situation, but no opening apparent on the surface, the peritoneum seemingly passing uninterruptedly over it. On being divided in the manner that the bodies are usually bisected (*i.e.* from pole to pole), no central cavity is visible, nor any canal, and it presents appearances precisely similar to No. 8, although the effusion of blood is not so great.

The left ovarium has its corpus

luteum precisely like the preceding. No orifice is found leading to any central cavity, and on making numerous horizontal slices of this corpus luteum quite to the base, we can observe not the slightest appearance of a cavity.

Both these corpora lutea were very firm, the peritoneal tunic being stretched as it were over them, as by their presence; they were also vascular.

No. 11.—*Uterus similar in dimensions to the last* (No. 10.) *The horns are enlarged, and have evidently a fœtus in each side.*

Both ovaria appear entirely composed as it were, of one corpus luteum in each. I examined them with great care, and by dissecting them fairly out of the ovary almost satisfied myself that they were glandular bodies. With care they can be dissected quite entire; more especially, if left covered with a delicate cellular texture, which covers and invests them precisely as the similar texture does the fœtal kidneys, thymus gland, &c.

No. 12.—*Uterus, gravid, contains two lambs, and in all respects resembles the preceding.*

No. 12.—In my note-book I find the following observation, 15th September. The ovaria of a ewe are now before me. This animal had had three lambs at different times; the last in the spring preceding the autumn in which it was slaughtered. The vesicles of De Graaf are numerous and obvious, but there is not a vestige of a corpus luteum.

No. 14.—*Sheep's uterus.*

Gimmer, æt. 2. Never had lamb. Presents precisely the appearance of those examined previously.

Ovarium (right) weighs 16 grs. Numerous, but rather small, Graafian vesicles. No distinct yellow body. I have, with the utmost care, dissected out a Graafian vesicle, entire, from the stroma: this requires dissection, in consequence of the numerous vessels which pass towards it. Externally, the cyst presents still a flocculent aspect, as if covered irregularly with cellular membrane, and especially cut blood-vessels. I opened this cyst with delicate sections, and found the interior occupied with a limpid colourless fluid, and, floating in the interior, a granular looking membrane collapsed, and here and there torn across; it floated readily out of the cyst, and with a minute, white, opaque body. The cyst left still with the ovarium is smooth internally, with numerous blood-vessels distinctly seen ramifying in its walls. Unless the opaque body is the ovule, which I have unfortunately cut into in opening the cyst, I can see no other body to answer for it.

Ovarium (left) weighs 28 grs. Presents a well-marked yellow body, though not vascular, and, if my theory is correct, receding or going back. There are eight distinct Graafian vesicles, though these are small in size. I proceeded to dissect in the line of the entrance of the vessels (*i. e.* posterior or fixed margin), and came upon a very distinct and beautiful Graafian vesicle. It is spherical, delicate yellow, like, in fact, the ova matured of a trout; a large blood-vessel distributes its branches to it. It is placed close to the corpus luteum, which itself feels at its base soft and pulpy, as if a fluid were in the centre. I have opened this beautiful cyst with the greatest care, and find its contents precisely similar to that described in the other ovary, *i. e.* a fluid with a collapsed membrane (granular looking) inside. The latter floats out with the fluid, which is limpid and clear. The vascularity of the cyst is perfectly beautiful. The inner sac appears to have no direct communication with the cyst.

The yellow body was remarkable for its yellow colour, and want of vascularity. There is assuredly no cavity in the interior, the arrangement being strictly that of the cow.

No. 15.—*Uterus of a Quey.*

Weight, 10 oz. Length, from os uteri to fundus (bifurcation), between the horns, 9 inches.

This animal was stated by the butcher to have been about two years old, and most assuredly never to have had a calf.

Left ovarium weighs 52 grs. Length between poles, 1 inch, 2 lines; diameter across, 6 lines.

Externally, this ovarium presents numerous semi-transparent spots, which are evidently cysts full of a fluid. At one point I observe a small puckered orifice (like the natural opening of an abscess). The whole ovarium feels as if filled with a fluid. No prominent yellow body, as is seen so well marked

in the other ovarium. In order to vary the sections, I cut along the posterior (fixed margin of the ovarium), and found the interior nearly occupied with a cyst full of a yellowish serous fluid. The cyst also contained flocculi, as of portions of a delicate membrane broken up. The cyst itself consists of a firm almost semi-cartilaginous membrane, on which I observe ramifying numerous blood-vessels carrying red blood. I can readily insulate the cyst from the surrounding stroma. The interior appears perfectly smooth. The knife has bisected one of these irregular looking vermilion-coloured patches, placed close to the cyst, but, so far as I can trace, having no immediate connection with it. The vermilion colour of this patch evidently does not depend on the presence of blood, but it looks more like a piece of dyed silk velvet. There seem to be six or seven of these vermilion-coloured patches, varying in size; and I can distinctly feel that the ovarium has a greater degree of density and solidity in those parts. I observe, above, the existence of a small puckered orifice; it is placed in the centre of a yellowish spot, has no connection with the cyst, but seems to me to be the remains of one of those yellow bodies (corpora lutea) seen in the sheep and cow, and which are originally the vermilion bodies.

There is another pretty large cyst in this ovarium, and numerous smaller ones, all containing a yellowish fluid.

Right ovarium, pole to pole, length, 1 inch, 3 lines; from uterine pole to apex of corpus luteum, 1 inch, 6 lines; diameter across, 1 inch; weight, 146 grs.

Externally the ovarium is studded over with prominent vesicles (there are at least twelve of these, all full of a fluid), projecting from the free margin, and looking outwards. There is a prominent vascular yellowish body, the apex presenting distinctly the same puckered-like appearance as described and drawn by me in the sheep. A transverse section of this body, four lines from the free extremity, presents a fine close but glandular looking structure. Nearly central, I see distinctly a change of structure, appearing to me to be condensed cellular membrane; as if it were the fine cellular texture which surrounds and invests the body itself, was here collected and puckered up. A second careful inspection shews it to be distinctly connected with numerous white cellular bands running towards the surface, and to be rather of an elongated form, like a cicatrix.

Weight of this body, 86 grs.; total weight of ovarium, 146 grs.; weight of ovarium, 60 grs.

The above weight was taken after I had dissected it carefully out of the ovarium: this is readily done, its connection being only cellular, and no doubt vascular, although I observed no very considerable vessels, or pencil of vessels, divided; it is still invested with a fine cellular membrane. The prominent part seems to me completely invested by the peritoneum and a thin layer of the proper ovarian tunic. If the investing cellular membrane, on the other hand, has not given way, it is unquestionably extremely thin on this projecting part. On a re-examination of this body and ovarium this morning, I am almost satisfied that it is originally one of these vermilion bodies (glandular), goes on to development, performs some function (why not a fluid connected with the passage? a preparatory stage to the passage of the vesicle itself? a purely secreting organ, and not analogous to the corpus luteum in man?) The body then wastes away, loses its vascularity, becomes yellow, and presents the appearance of a small puckered hole, surrounded with a dense base, precisely like the healing of an abscess. It appears altogether so.

No. 16.—*Uterus and ovaria of a cow said never to have had a calf.*

Weight, 12 oz.; length from os uteri to fundus, 7 inches, 6 lines.

The interior of this uterus is of a yellowish skin colour, and with no appearance of vascularity anywhere. The cotyledons are distinct, though in no shape vascular, and present the appearance of little mammillæ cut longitudinally.

Right ovarium weighs 31 grs.; length from pole to pole, 10 lines; is nearly globular; not unusually vascular; smooth externally; and near its distal pole has two spots on its surface: these are about one line in diameter, having a puckered straw-coloured edge or disk, with a bright red centre. The remainder of the ovarium seems nearly

entirely composed of two large vesicles: one of these is larger than the other; and at one part the tunics seem extremely thin, semi-transparent, as if distended and ready to give way by the pressure from the contained fluid. I succeed, with the point of a fine lancet, in dividing the peritoneal envelope, and separate it, to the extent of more than a line, from off surface of the largest vesicle; but this now gave way; a quantity of perfectly limpid colourless fluid escaped. The inner surface of the vesicle showed great vascularity, but I could observe no membrana granulosa. In examining one of the smaller vesicles, I have been a little more fortunate in finding, in the interior, shreds of what seemed to have been the membrana granulosa; but I can perceive nothing like the cumulus or disk with the ovum. In dissecting this ovarium, I observe the texture of the body itself feels and cuts like a piece of cartilage, particularly around the spots I have already alluded to, which, by the bye, I find pass deep, retaining their brick-dust colour, into the centre of the ovarium.

Left ovarium weighs 100 grs.; length from pole to pole, 1 inch, 3 lines.

This ovarium has an oval compressed form, and its distal extremity, or that looking towards the fimbriated opening, is nearly entirely occupied with a glandular looking body; numerous vessels carrying red blood are seen on the surface, more particularly towards a projecting part of the body, at the blunt apex of which I observe a depression, if not a hole, leading towards the interior. (I have just assured myself that the peritoneum, at least, passes over this apparent hole in the yellow body.) Near the internal pole I see four spots precisely similar to those described on the right ovarium, and at least three distinct vesicles; the diameter of the largest is three lines. A two-inch microscope shews me numerous smaller vesicles. I have dissected out one of these vesicles very readily, and find, in the interior, shreds of a membrane with abundance of fluid. Near the vesicle lies a rounded body, the size of a pea, of a dark blue colour; upon making a section of it, I find its contents fluid blood. The inclosing membrane was extremely thin, but strong.

No. 17.—*Uterus of a cow said to have had two calves.*

Weight, 16 oz.; length from os uteri to fundus, 10 inches, 6 lines.

The os uteri in this specimen presents numerous deep fissures; it has a more cartilaginous feel under the knife. The parietes of the neck and horns are thicker, presenting numerous large vessels cut across. The inner surface has a darker, more fleshy, colour. The cotyledons project, and want that central fissure remarked on the virgin cotyledons (No. 16). The broad ligaments present numerous very tortuous vessels running between its folds.

Additional facts wanted.

1. Age of the cow.
2. When she last had a calf.
3. At what particular period does the cow receive the male.
4. How long will she suckle the calf.

Right ovarium weighs 140 grs.; length from pole to pole, 1 inch, 2 lines.

It seems nearly composed of a reddish glandular looking mass, on the surface of which numerous blood-vessels may be seen ramifying. These vessels appear to me peculiar: they are not like the branches of a larger trunk, but appear like short, rather irregular-shaped, canals; and the microscope shews innumerable fine vessels (containing red blood, however) connected with these, and communicating everywhere with each other. Are these, then, the capillaries of the ovarian arteries, or are they new vessels? Is it this appearance which has induced some persons to compare the function of the ovaria to a sort of inflammation? The vessels are certainly precisely like those which I once saw in a pseudo membrane, in a case of pericarditis.

The ovarium presents no very distinct specimens of peculiar reddish spots, so well marked on the virgin ovarium (No. 16); but, 1st, the large glandular looking body already alluded to; 2d, another glandular looking body, of a yellowish colour, much smaller than the first, and with a very distinct hole and depression in its most prominent part; 3d, semi-transparent vesicles, three distinct and pretty large: these appear to me double, *i. e.* either composed of *two* vesicles, or *one*, having something like an opaque line running down the centre.

Left ovarium weighs 85 grs.; length of fixed margin or base (pole to pole), 1 inch, 2 lines.

This ovarium seems nearly entirely composed of vesicles, two of them large, having a diameter of nearly six lines; blood-vessels are seen ramifying on the surface. There are, in addition, numerous opaque spots, like small vesicles; but above all I observe two very distinct fissures about a line in length. The edge of these fissures feels, under a delicate probe, indurated, semi-cartilaginous; a section made into the ovarium, near one of them, shews that it is in immediate connection with a small yellow body: this, then, I conceive to be the remains of a large reddish yellow body, such as we have in the other ovarium; and, indeed, the second observation in the preceding description of the right ovarium appears to me really one of these bodies gradually losing its formation (whatever that may be), and disappearing, ultimately to assume the appearance of a depressed fissure with indurated edges, as is seen in the ovarium now under consideration.

No. 18.—*Uterus of a cow, said to have had four calves.*

Weight, 27 oz.; length from os uteri to fundus, 11 inches.

The os uteri here presents the fissure I have alluded to in No. 17, still more developed, giving rise, in front, to numerous lobulated folds. The neck, body, and horns, but still more like a cartilage; and the section displays still more distinctly innumerable vessels cut across, and, as it appears to me, contracted, not carrying fluid even during the life of the animal. The cotyledons now look like large irregular elevations, the section shewing a greater number and a more minute condition of, blood-vessels.

Additional facts wanted.

1. Age of the cow.
2. When she last had a calf.

Right ovarium weighs 145 grs.; length from pole to pole, 1 inch, 2 lines.

This ovarium seems to me curiously placed in respect to the poles and fimbriated extremity of the uterine tube: this is probably caused by the adhesions of the peritoneal laminæ of the broad ligament. It is elongated, kidney shaped, presents numerous large distended vesicles, with fine (not very well defined) brick-dust coloured spots irregularly dispersed over the surface. One of these appears to form a part of the wall of a vesicle.

Left ovarium weighs 205 grs.; length from pole to pole, 1 inch, 2 lines.

This ovarium presents a large reddish-yellow, glandular looking mass — it wants symmetry;—numerous red spots; and, what I have not hitherto observed, numerous white granular looking masses, slightly elevated on the surface. The fimbriated margin has a remarkable fleshy appearance. Numerous thin transverse stripes of the yellow body displayed nothing like a central cavity. I observe that immersion in proof spirits extracts the colour from the yellow body, whilst it appears to render the red spots brighter.

No. 19.—*Uterus of a cow with calf.*

Weight of uterus, 6¼ lbs.; length from os uteri to fundus, 10 inches.

The calf lies in the right horn, which projects very considerably beyond the fundus of the uterus. The fœtus, when removed from the uterus, weighs 1 lb. 4 oz.

Right ovarium.—There is a distinct corpus luteum: its external surface is very vascular, the whole ovarium being of a deep brick-dust colour. We can observe no external orifice of the corpus luteum; it seems entirely invested by the peritoneum. A thin horizontal slice being taken off from the more prominent part of the corpus luteum, blood flowed at every pore, so as to entirely cover the cut surface.

We can observe no central cavity. With the exception of its vascularity, then, it resembles the corpora lutea formerly described. A deeper slice gives the same appearance, even though such sections were continued to the basis of the body. There are Graafian vesicles in this ovary, but no other appearance of corpora lutea.

Left ovarium is small, flat, triangular, of a pale dirty white colour. Graafian vesicles numerous, but no corpora lutea. Various sections exhibit no appearance whatever of yellow bodies or corpora lutea; and the want of vascularity is quite striking.

CASE OF PHLEGMONOUS ERYSIPELAS TREATED BY ACETATE OF LEAD AND OPIUM.

To the Editor of the Medical Gazette.

Sir,

The conflicting opinions of medical men regarding the local treatment of phlegmonous erysipelas, and the implicit confidence of many in the practice of large and small incisions, which cannot at all times be made available (especially when it attacks the face), have induced me to beg that you will, through your valuable journal, give publicity to the following case, treated locally by fomentations and poultices containing acetate of lead and opium. I am not aware that the above remedies are either generally employed or sufficiently appreciated in the treatment of this disease.

I know, indeed, that the acetate of lead is considered by some a dangerous remedy when used externally, as well as when employed internally—nay, it has been considered by many a very powerful irritant poison; but I am not aware of a single fatal case from the remedy in question; yet I do not deny the fact that colic, griping, vomiting, and even palsy, may be produced by its long continued and injudicious use. These results, however, are too rare on the one hand, and its beneficial effects, in the hands of scientific men, too numerous on the other, to leave a doubt upon the mind regarding its efficacy in many affections. It exerts a remarkable sedative effect upon the nervous system; and in no circumstance is this action more fully exemplified than in allaying the pain always present in local inflammations, more especially when combined with opium. These, together, seem to act specifically in relieving the turgid and congested state of the capillary vessels common in all local inflammations; and are not only applicable to phlegmonous, but erythematic and other erysipelatous inflammations.

Opium, I am aware, has also been objected to as a local remedy in erysipelas, from the misconceived idea that it repels the eruption; an idea probably founded on the fact that inflammatory action has frequently been suddenly arrested under its use. But what are the indications? Are they not to allay pain, and arrest the inflammatory action? And I know of no local remedy more efficacious in fulfilling these indications, and in preventing gangrene and sloughing in erysipelas, than the acetate of lead and opium, employed as above described. I do not make these assertions from a crude or indigested theory, but from a careful observation of facts; and I should not consider myself in the discharge of an important duty, which every medical man owes to the profession and the community, if I buried in oblivion that which considerable experience has taught me is not only efficacious but safe.

I have often reflected with admiration on the character of Sydenham, who says, "I have always thought it a greater happiness to discover a certain method of curing even the slightest disease than to accumulate the largest fortune. * * * Can a person give a stronger proof of his benevolence and wisdom than by endeavouring always to promote the public good rather than his private interest, as he makes so inconsiderable a part of the whole? And, in reality, as it is the part of a wicked man to destroy his fellow creatures, so it is the duty of a good man to preserve them, and instruct others how to preserve them, from death."

If, therefore, the foregoing and following remarks shall in any way benefit my professional brethren, and, through them, be made applicable and efficacious in the relief of suffering humanity, I shall consider myself not without reward.—I am, sir,

Your obedient servant,

William Smith, M.D.

Weymouth, February 16, 1844.

Case.—Master R. B., æt. 4½ years, has just recovered from scarlatina; is one of a family every child of which exhibits evident signs of struma; was attacked with erysipelas of the face and scalp on Tuesday, January 9th, of the present year, and was placed under my care on the Friday following. When I first saw him, the right side of the face, embracing the forehead, right eye, cheek, and right side of the nose, was very much swollen. The erysipelatous blush was confined to a portion of the scalp, forehead, right eyelid, and side of the nose, on which surface numerous

minute vesicles appeared, and were filled with a limpid fluid. There was much general excitement and fever present; pulse 138 beats per minute; the tongue foul and dry, with much thirst.

℞ Hydrarg. c. Cretâ, gr. iij.; Pulv. Rhei, gr. vj. M. ft. tales vj. One to be taken every two hours.

℞ Acet. Plumb. ʒj.; Pulv. Opii, gr. x.* Misce pro lotione. To be dissolved in twelve ounces of hot water, and applied to the inflamed surface, through means of soft cloths, kept constantly wet.

13th.—Patient very restless, and has been so during the night; four powders taken; bowels have not acted; skin hot and dry; pulse 132; tongue covered with a yellow fur. Powders omitted.

℞ Tinct. Sennæ, ʒiij.; Infus. Sennæ, ℥iij.; Sulph. Magnes. ℥ss.; Tart. Antim. gr. iss.; Syrupi Simp. ʒj. M. A dessert spoonful every half hour, until the bowels are freely opened. Lotion continued.

Saw him again in the evening, when it was reported that he had slight vomiting after taking the third dose of the above mixture, but not afterwards, though it was regularly administered. Has had a very scanty dark coloured stool.

Medicine to be continued, and hair removed.

14th.—Passed a very restless night; medicine all taken; no further motion of bowels; tongue much loaded; pulse 136. The minute vesicles have now assumed the form of broad phlyctænæ, filled with a viscid serum; the parts between them present a black red appearance. The right eyelid, on which there is a large vesicle, has a peculiar gangrenous tint. I opened all the phlyctænæ with the scalpel, and pressed out their contents, a sort of half gelatinous serum. The inflammation now extends as far backwards as the lambdoidal suture on the right side. Ordered—

A poultice of bread and water, containing half a drachm of the acetate of lead and ten grains of opium, to be applied to the whole of the inflamed surface.

℞ Calomelanos, gr. iij.; Pulv. Rhei, Carb. Sodæ, aa. gr. iv. M. ft. tales ij. One to be taken immediately, and the other after three hours if the bowels are not previously opened.

3 o'clock.—Saw the patient again; both powders taken; bowels not acted on. Ordered a simple enema.

Saw him again at half-past eight. The enema was administered; examined the ejected matter, and could scarcely detect any fæces in it. Pulse 140; tongue black in the centre, and parched; tip and edges a bright red colour. Ordered—

The enema to be repeated, with the addition of Tinct. Assafœt. ʒij.

I waited, and saw it administered, and, like the former, it brought away very little fæcal matter.

℞ Infus. Sennæ, ℥ij.; Sulph. Magnes. ʒvj.; Syrupi Aurant. Syrupi Simp. aa. ℥j.; Tinct. Jalapæ, ʒiij. M. A table spoonful every half hour, until the bowels are freely opened. Poultice to be renewed, and to contain the same ingredients as before.

15th.—Reported to have talked incoherently, but on the whole passed a quieter night. About one-third of the mixture taken; had a copious stool this morning, very dark and consistent, and smells strongly of the assafœtida. Pulse 132, of good strength.

Mixture to be continued at intervals of two hours. Poultice to be renewed as formerly.

3 o'clock.—Has had an occasional rigor since morning; skin very hot and dry, except the extremities, which are cold; pulse 136, irregular; tongue less parched. Thirst continues, for which he has had toast-water, and a tea-spoonful of wine every two hours. The left eyelid is now much swollen. Removed the poultice, and, after placing it in hot water for some minutes, replaced it on a surface partly in a state of gangrene. Ordered the feet to be put in warm water for ten minutes, and afterwards rolled in warm flannel.

℞ Aq. Acet. Ammon. Mist. Camph. aa. ℥ss.; Nit. Potassæ, ϑj.; Syrupi Aurant., Aq. font. aa. ʒj. M. A tea-spoonful every half hour until the one half of the mixture is taken.

9 o'clock.—Medicines regularly taken; skin rather cooler; has had a scanty stool, mixed with mucus.

Last medicine to be continued, the purga-

* For adults I may remark that the quantity of opium ought to be increased to half the quantity of the acetate of lead, or even more; but as decomposition takes place, the acetate of morphia being formed and held in solution, while the meconate of lead is precipitated, it is better to have an excess of the acetate of lead over the opium employed. The solution ought to be strained through fine linen before being used.

tive mixture to be omitted, and poultice renewed, covering both eyes.

16th.—Was delirious during the night, but slept at intervals. Pulse 132; skin moist.

Mixture continued. Poultice changed for the lotion first employed.

Spots of "varicella vesicularis" have now made their appearance on various parts of the body. Saw him again at 4 o'clock with my friend Mr. Trowbridge, whom I casually met. On mentioning the case to him, he very kindly accompanied me, and, after examining the little patient, considered him in a very precarious state. Pulse 140, weak, and intermitting; great prostration and stupor; skin moist.

Mixture continued. To have half an ounce of gum arabic in his drink, and wine repeated every hour.

9 o'clock.—All the mixture taken. No stool to-day. No urine passed since morning. Complains of pain in the lower bowels. Applied a cold smoothing-iron to the soles of the feet, and the effect was instantaneous: he made water to about ℥xij.

Ordered the purgative mixture to be repeated, ℥ss. for a dose, every two hours, until it operated freely. Warm lotion continued.

17th.—Passed a restless night; bowels opened early this morning—stool more healthy in appearance. Pulse 132, weak, slight subsultus tendinum. Tongue florid at the tip and sides; skin cooler. On removing the cloths from the affected parts I found the bases of all the phlyctænæ in a state of superficial ulceration, and many of them bleed upon the slightest touch.

The right side of the head, from the lambdoidal suture forwards, embracing the temporal and frontal portions, the eyelid and side of the nose, is one continued raw surface; those parts only that were previously covered by vesicles assuming the peculiar characters of ulceration.

Ordered a simple poultice. All medicines omitted. Wine continued.

Saw him again in the evening at 9 o'clock. Has had epistaxis (a frequent symptom in erysipelas). Pulse 130, full; tongue rather cleaner. On the whole, seems better.

Renewed the poultice, with opium, &c. as before.

18th.—Passed a good night, lies quiet, and inclines to sleep. Pulse 120; tongue much improved. The varicellous eruption faded, though a few vesicles yet appear to be developing themselves. Bowels not opened.

Ordered ℥j. of the purgative mixture for a dose, and the following tonic—

℞ Tinct. Rhei. Tinct. Cinchon. aa. ℥j.; Syrupi Simp. ℥ij. M. A tea-spoonful thrice daily.

8 o'clock P.M.—Bowels opened; is very restless; cries much.

Renewed the poultice, with a double quantity of opium.

19th.—Passed a tolerable night. Says he is better. Pulse 120. Inflamed surface very irritable. Changed the poultice for Ung. Zinci. Has opened the left eye; right one still closed. Asked for meat this morning. Ordered sago and a little wine.

8 o'clock P.M.—Has had a remission of all the febrile symptoms. Pulse 140. Reported not to have taken the sago, but had, by desire, a little beef.

Ordered one of the powders containing calomel, &c.; to be followed up, in two hours, by a tea-spoonful of the purgative mixture. Zinc ointment continued.

20th.—Passed a very restless night. Bowels opened this morning. On examining the stool, I discovered undigested food and currants, and on more minute inquiry as to what the child had eaten the previous day besides the meat, it was reported that he had had some "bun and cheese-cake." Pulse 132.

Medicine to be repeated as yesterday.

8 o'clock P.M.—Has had two stools. Seems better.

Tonic medicine and wine continued. Powder, &c. omitted.

21st.—Slept well; pulse 120. Asked for food to-day—ordered him fish.

Continue as before.

22d.—Is still better. Pulse 112; tongue becoming clean. Says he would prefer mutton to fish—ordered chicken-broth.

Ointment and medicine continued.

23d.—Pulse 96; scalp healing rapidly; bowels open. Sat up a little this morning.

Continue.

24th.—Right cheek swollen and red,

the redness extending from the side of the nose (on which two irritable pimples appear, which he is reported to have constantly rubbed yesterday), to the angle of the jaw.

Ordered the inflamed parts to be well fomented.

8 o'clock P.M.—A second attack of erysipelas is now evident; the whole of the right cheek is a bright red colour; the right parotid and submaxillary glands are enormously swollen. The lips are so much swollen on the right as to give the mouth the appearance of being drawn to the left side. The little patient cannot open his mouth to protrude the tongue. The mucous covering of the lips presents a dark red glistening appearance.

Discontinued the lotion, and applied a poultice containing 3ss. of Acet. Plumb. and gr. viij. of opium, which was renewed twice daily, and the powders and purgative mixture administered as the circumstances of the case demanded, up to the

29th.—When the inflammatory symptoms began to subside. Precisely the same plan of treatment was followed as in the first attack, and with the happiest results. I repeat, that I know of no local application to be compared with the acetate of lead and opium in arresting the inflammatory action and tendency to gangrene in this formidable affection. The livid base of the phlyctenæ, under the use of absorbent powders, &c. &c. often terminate in gangrenous ulceration, which not unfrequently extends to the cellular tissue, forming caverns containing unhealthy pus and dead sloughs. I confess that in the above case I feared this result; but up to this time (Feb. 1st), he is progressing favourably, and has to-day, for the first time since the attack, opened his right eye; showing that the levator palpebræ and orbicularis palpebrarum are preserved from "suppuration and sloughing, and consequent disfiguration."—(Bell).

Feb. 3d.—The whole of the inflamed surface is nearly healed, and he may now be pronounced out of all danger.

P.S.—I may further add, that a poultice made of bread-crumb, containing a drachm of the acetate of lead, and two scruples of opium, is also peculiarly efficacious in allaying the swellings of phymosis and paraphymosis, common consequents of chancre and gonorrhœa, often known to effect gangrene and sloughing under the application of other remedies.

Never did I witness their good effects with more satisfaction than when clinical clerk at the Edinburgh Royal Infirmary. The poor patient to whom I allude had prolapsus ani, which she said was of several years' standing. On admission, the tumor appeared nearly the size of a man's clenched hand, and from the degree of strangulation it had a dark red gangrenous appearance. An attempt was made to reduce it by Mr. Symes, assistant-surgeon, and Dr. M'Kenzie, who happened to be in the medical wards at the time, but to no purpose. As the patient was admitted in the evening, and was entered on my list, I prescribed a poultice containing Acet. Plumbi, 3ij., Pulv. Opii, 3ss., which was kept applied till the usual hour of visit next day (12 o'clock), when the same gentlemen who had tried to replace the gut the previous day now effected its reduction with comparative ease.

ON THE EFFECTS OF OPIUM ON THE INFANT SUBJECT.

By John B. Beck, M.D.

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As a remedial agent opium has always and justly been looked upon as one of the most valuable in our possession. It has been styled the "donum Dei," the gift of God to man; and Sydenham says of it, that it is "so necessary an instrument in the hands of a skilful physician, that the art of physic would be defective and imperfect without it; and whoever is thoroughly acquainted with its virtues and the manner of using it, will perform greater things than might reasonably be expected from the use of any single medicine." High as this panegyric is, it is unquestionably just. Admirable, however, as this agent is, if properly used, it is equally true that, in unskilful hands, there is scarcely any article in the whole materia medica capable of producing a greater amount of mischief. That this must be the case is evident, if we reflect for a moment upon the nature of the effects which it is capable

of producing, and, at the same time, recollect that these effects are uniformly the same, but are modified by various circumstances. Thus, at one time, we find it operating exclusively as a stimulant, while at another it displays nothing but its sedative power. Given under certain conditions of the system, it quiets irritation, calms the pulse, softens the skin, and promotes balmy sleep. Under other conditions of the system, it quickens the pulse, suppresses the secretions, increases animal heat, and disturbs the brain. In the one case, the state of the patient is materially improved; while, in the other, it is rendered worse. It depends, then, entirely upon the circumstances under which it is given, whether it will prove salutary or injurious, and it is this which renders the proper use of it a matter which requires so much tact and experience.

Now, the circumstances which modify the action of this agent are numerous. Age, sex, temperament, climate, nature of the disease, stage of the disease, in short, everything which can affect the condition of the system, modifies, in a greater or less degree, its effects. To understand, therefore, completely the manner in which it operates on the system in its different phases, it is necessary to analyse all these modifying circumstances. On the present occasion I propose to make a few remarks upon only one of them viz. *age*, with the view of showing more particularly the peculiarities of its operation on the young subject.

With regard to the effects of opium on young subjects, there are two facts which seem to be well established. The *first* is, that it acts with much *greater energy* on the infant than it does on the adult; the *second* is, that it is more *uncertain* in its action on the infant than the adult. It is in consequence of these peculiarities attending its operation on the infant, that even the smallest quantities have not unfrequently produced the most unexpected and even fatal results. Of this, almost every physician must have seen some melancholy instances. Dr. John Clarke states, that "half a drachm of genuine syrup of white poppy, and, in some instances, a few drops of Dalby's Carminative, have proved fatal, in the course of a few hours, to very young infants." In one case, he says, forty drops of Dalby's Carminative destroyed an infant. Mr. Marley says, "I have known three or four instances where the most dangerous symptoms were produced by Godfrey's Cordial and Dalby's Carminative; two nostrums which have no doubt added considerably to the mortality of infants." In a case that fell under his observation, the most rapid and alarming symptoms followed the exhibition of an ordinary dose of syrup of poppies. In another case, he knew half a small tea-spoonful of the syrup of poppies prove nearly fatal to a child eight or ten days old. Thirty-five drops of Dalby's Carminative he has known to prove fatal to a young child, while, in other cases, larger doses have been given without any unpleasant effects. The same writer relates the case of an infant, nearly poisoned, by considerably less than half an ordinary sized tea-spoonful of paregoric. Dr. Bard says, he once knew an infant of several months old killed by ten drops of laudanum, and another brought into very great danger by less than two drops. Dr. Montgomery states, that he has known more than one instance in which a tea-spoonful of the syrup has proved fatal to a healthy child. Professor Hamilton relates two cases, in which four drops of laudanum proved fatal to children some months old. Dr. Merriman reports two cases, in which a dose of Godfrey's Cordial proved fatal. He also states, that he once saw a child in the month, thrown into a state of excessive stupor, by taking one dose only of a mixture in which there were four drops of laudanum; the actual quantity swallowed could scarcely have amounted to one drop. Dr. Christison states, that "the administration of three drops of laudanum in a chalk mixture for diarrhœa, to a stout child, fourteen months old, was followed by coma, convulsions, and death in six hours." In another infant, a few weeks old, death resulted from four drops of laudanum. Dr. Ryan states, that he has known one drop of the "sedative liquor of opium" narcotize an infant. Of laudanum, two drops have been known to kill an infant, nay, in one case, a single drop destroyed a new-born infant. I have myself seen a young child narcotized by about twenty drops of paregoric. The foregoing facts are sufficient to show that opium acts with peculiar

energy and uncertainty upon the infant subject. The causes of this would seem to be the following:—

In the *first place*, the great difference in the physical organization of the *infant* and the *adult*. In the young subject the brain and nervous system are much more impressible, and the slightest causes, as we know, will sometimes derange them. Besides, in the infant, the circulation is more rapid—there is a greater proportionate quantity of blood circulating in the brain, and hence a much greater tendency to cerebral determinations. From these peculiarities in the organization of the infant, it happens that convulsions are so much more common in the early periods of life. Thus, for example, the irritation of teething — of worms or crude matters in the intestines, is frequently followed by convulsions. Intermittent fever, which in the adult commences with a chill, in the child is frequently ushered in by a convulsion. Scarlet fever, too, in the child, not unfrequently commences with a convulsion, while in the adult I have never witnessed such an occurrence. Now, with such peculiar predispositions characterizing the system in infancy, it may readily be conceived how it is that such an article as opium should act with more power at that period than in after life.

In the *second place*, the difference in the *temperament* or *constitution* of infants. In the adult, we know, as a matter of fact, that opium differs greatly in its effects in different constitutions. Thus, as a general rule, the sanguine temperament does not appear to bear the use of this drug as well as the melancholic or the nervous. In the former, it is much more apt to produce cerebral disturbance, and in large doses is more likely to prove injurious. Now, infants differ from one another as much, if not more, than adults, in these peculiarities of constitution, and, as a matter of course, the difference in the effects of this article must be greater. Besides, as these peculiarities and differences can only be detected by actual experience, and as we cannot of necessity have the same benefit of experience in the case of infants, it is obvious that the difficulty of justly appreciating the action of this drug on the infant must be greatly increased. A greater or less degree of uncertainty, therefore, must necessarily from this cause attend its use in the early periods of life.

In the *third place*, the actual state of the system as to disease. There is no circumstance which modifies the effect of opium in so great a degree as this. In the adult, we see this continually. In some conditions of the system even small doses produce the most unpleasant effects, while in other conditions immense quantities may be given with little or no effect; thus, for example, when severe pain or spasm are present, quantities of this article can be borne which under other circumstances would prove exceedingly injurious. As illustrative of this, I quote an interesting case related by Dr. Percival. He states that a young man was admitted into the Manchester Hospital, on account of a violent spasmodic disease which recurred periodically in the evening, and after trials of various remedies, doses of opium sufficiently large to mitigate the violence of the paroxysm were ordered, and he took twenty-two grains every night during a week, without producing any soporific effect. On the eighth night he had no return of the spasm. He nevertheless took the opium, and in the morning was found dead. In this case a great and sudden change had unquestionably taken place in the nervous system of the patient, and to this must be ascribed the difference of effect. If in the adult the state of the system makes such a wide difference in the effects of this article, how much more so must all this be the case in the sensitive infant; and it is by not duly regarding this, that such unexpected results sometimes follow from the use of opium. Thus, for example, a child labouring under the acute pain of colic will tolerate doses, which, in the ordinary condition of the system, might prove destructive.

There is one condition of the young subject particularly in which this remedy is frequently resorted to, in which this is strikingly illustrated. I mean that state of exhaustion which arises from diarrhœa and other bowel complaints. In this state the head is very apt to become affected, and if opium be given with a view of checking the intestinal discharges, not unfrequently insensibility gradually creeps over the little sufferer, and in a short time death is the result; and this, too, even when the quantity used has been apparently

adapted with great nicety to the wants of the case. Every observing practitioner must have witnessed such instances. Now in many cases of this kind there can be no question that the child sinks under the sedative influence of the opium; and the reason is, that, in the exhausted state brought on by the disease, the system succumbs much more readily to the narcotic effects of this article, than it does in other conditions of the system.

The foregoing considerations appear to me sufficient to account for the greater power, as well as uncertainty in the action of opium on the infant, than on the adult.

If it be a fact, then, that opium acts in this way upon the infant, it appears to me to involve inferences of great practical moment, which cannot be too deeply impressed on the mind of the young practitioner.

1. That its use should *be avoided as much as possible* in the young subject. I will not say that it ought to be interdicted altogether, because, if used with discretion, it is a remedy of great value in many of the diseases of infants, but it should never be used unless there exists a strong and manifest necessity for it.

2. Great caution should be exercised in the form in which it is administered. No preparation should ever be used which *is not of a known and determined strength.* In England the *Syrup of Poppies* is the preparation most used for children. In this country it is also used, but not to the same extent. This is a pleasant and mild opiate, and on these accounts is well adapted for children. It is liable, however, to great objections. Besides being apt to ferment and spoil, it is very *variable in its strength.* On this account it is really a very dangerous article; and many cases are recorded (some of which I have already related) in which fatal results have followed the use of it, even in moderate doses. Another objection is, that it is liable to sophistication. Thus a mixture of *laudanum and simple syrup* has sometimes been sold for it. In the Lond. Med. Gaz. (May 1831, p. 253), a case is related, where a child died in consequence of a small dose of this latter compound having been given by the mother, who had previously given the same quantity of the pure Syrup of Poppies with advantage.

The best preparations for children are *laudanum,* and *elixir paregoric.* These are of known strength, and susceptible of division into the minutest doses. *Dover's powder* is another preparation, which may be given to children. It may readily be divided into the smallest doses, and it seems to act much more mildly than equivalent doses of simple opium. It need hardly be stated that all such articles as Godfrey's Cordial, Dalby's Carminative, &c. should be totally discarded from regular practice. Besides being uncertain in their strength, and on that account exceedingly objectionable, the sanction thus given to them encourages their use by persons out of the profession, who cannot be supposed to be acquainted with the dangerous effects of opium on the infant system.

3. In very young subjects, we should never begin the use of this article, except in *very small doses.* Although most practical writers lay down cautions about the use of opium in these cases, yet it does not appear to me that these cautions are sufficiently precise. Most of the writers to whom I allude specify doses as suitable to certain ages, without stating that even these doses may, in certain conditions of the system, prove just as injurious as much larger doses. To illustrate, I will quote the directions given by one of our standard authorities. Dr. Dewees says, "the proper dose of laudanum for infants and children, may be reckoned at the following rates. Half a drop for a child under ten days old; a drop, for one from that period to the end of the month; a drop and a half, or two drops, for one from that period to three months; three drops from this to nine months, &c. &c." "When laudanum is to be used as an injection, we may safely increase the quantity three or four fold." He adds, "these doses are prescribed for children who are altogether unused to the use of this drug; the power of bearing more may be rapidly increased by habit." Now, it appears to me that a more dangerous set of directions could not well have been given. Although many children may bear the quantities here specified without injury, yet every now and then a case will occur in which the most serious results will follow; and it is against these that the necessary precautions should always be taken. In

the case of a new-born infant, we are entirely ignorant of the manner in which such an article as this will affect it, and it therefore will not do to begin with *average* doses. To practise safely, we must feel our way with doses much smaller, and then we shall have some guide, and the only guide which the nature of the case admits of, to make the necessary increase in the quantity to be given. Under no circumstances as a first dose ought half a drop to be given to a child under ten days—or a drop to a child during the first month. One eighth of a drop is sufficient to begin with. The quantity, too, directed for an injection is too large. Instead of three or four times the quantity given by the mouth, as far as my experience goes, double the quantity is quite sufficient.

4. The doses of opium should not be repeated *at too short intervals.* This, too, is a point which is not sufficiently guarded by some practical writers. One writer, for example, after specifying the quantity suitable for a child of two or three months, adds, that "this is not to be repeated in less than an hour." If this means any thing, it means, of course, that after the lapse of an hour the dose may be repeated with safety. This, however, will not be sustained by experience. Even if a first dose does not narcotize, it frequently produces a degree of listlessness and indifference to food on the part of the child, which, if it be kept up by repetitions of the opiate, may eventually prove just as destructive. This is strikingly illustrated in those states of exhaustion from diarrhœa, where the due supply of nourishment is so essential to recovery. Where repeated opiates are necessary, the intervals between the doses should be long enough to enable the child to recover somewhat from the sedative influence.

Before concluding these observations, I cannot refrain from making a remark or two in relation to the use of this article by persons out of the profession. The mischief that is done in this way is incalculable. If, in the hands of those acquainted with its virtues, opium is an article so dangerous and uncertain in its action, what must it be in the hands of the ignorant? and yet we see it given to infants, day after day, and night after night, by nurses and mothers, not merely without the consent of the physician, but sometimes contrary to his express injunctions.

There are two ways in which it is used by persons out of the profession, in both of which it proves injurious to the child. The first is by giving it in occasional doses; the second, by giving it constantly. The first is bad enough, but the second is still worse. The first, now and then, unexpectedly destroys a child; the second is followed by a train of the most disgusting consequences, worse, if possible, than those of habitual drunkenness in the adult. Fortunately, these latter cases are not of such frequent occurrence; occasionally, however, they are met with where the parent, for the purpose of quieting it, has been induced to keep a child for months under the daily influence of paregoric, Godfrey's Cordial, or some other opiate nostrum. In these cases, the effect is to stunt the growth of the child; it is emaciated and puny; the skin is flabby and shrivelled; the lips are bloated, and the countenance sallow and wrinkled. There is an absence of all intelligence, and the whole appearance is haggard and aged, presenting a sort of "miniature of old age." Not long since I witnessed a case of this kind, in which a child of fourteen months old did not appear larger than one of two or three months. With the exception of one month, it had been kept upon paregoric almost every day since its birth. The mother was a poor woman, and on inquiring of her the reason, she stated that she had resorted to this method of keeping the child quiet while she attended to her work.

Of the extent of the mischief annually perpetrated by the unprofessional use of opium, some idea may be formed from a report made to the House of Commons, containing returns from the coroners of England and Wales, of the inquisitions held by them during the years 1837 and 1838, in cases of death by poison. The total number of deaths by poison in these years was 543, of which 52 were very young children, most of them at the breast, in consequence of opium, or some of its preparations, having been given by mothers and nurses, in ignorance of its effects. In addition to this, 20

more were destroyed by opium or laudanum administered in mistake for other medicines.

These facts are certainly appalling; and if any subject connected with medical police is worthy of the attention of the public authorities, it is certainly this. How the evil is to be corrected, it is not easy to say. Much, however, might be done by the proper dissemination of information on the subject. In most cases where opium is administered to children by persons out of the profession, it is disguised in the shape of some nostrum, so that they are not aware of what they are giving, and even when they are aware of it, they are not acquainted with the dangerous effects of it on the infant system. If parents and nurses were made better acquainted with the fact that such articles as Godfrey's Cordial, Dalby's Carminative, and most of our medicated lozenges and candies, owe all their composing properties to the opium which they contain, and that opium even in small doses is frequently a deadly poison to the infant, one would suppose that it could not but exert a salutary influence in correcting, to a certain extent at least, the evil of which we are speaking; and the dissemination of this kind of knowledge by the proper authorities would confer a lasting benefit upon the community.

I have thrown together the preceding observations because the subject is one of interest and importance, and because it appears to me that it has not sufficiently attracted the attention of the profession.*

INFANT POISONED WITH DOVER'S POWDER.

To the Editor of the Medical Gazette.

Sir,

About ten grains of Dover's powder were given, in mistake, to an infant seven weeks old. Twenty hours afterwards it died, with all the symptoms of poisoning by opium. By order of the coroner, I made a post-mortem examination of the body; and, should you consider the appearances of sufficient interest to merit a place in your valuable journal, you will greatly oblige me by inserting an account of them.—I have the honour to be, sir,

Your very obedient servant,

Thomas Griffiths.

Hammersmith, March 4th, 1844.

Countenance placid; tongue and gums swollen and white; fingers of both hands firmly contracted; commencing lividity on abdomen; liver healthy in colour; colon much distended with flatus, and peculiarly white; bladder full of urine, and rising high above the pubes; spleen, kidneys, and intestines healthy.

The liver was gorged with blood. The stomach contained a very small quantity of colourless viscid matter. The inner coat very vascular at the great curvature; and in other parts were small patches of highly injected vessels. In the cavity of the abdomen was about half an ounce of fluid.

The lungs were gorged with blood, which ran freely from incisions made into them. The upper lobes infiltrated with greenish serum. The pericardium was very vascular, and contained about a drachm of fluid. The right auricle empty. The left auricle and right ventricle contained solid fibrin. The left ventricle some thin fluid blood, and a small coagulum. The thoracic aorta was partially filled with coagula. That blood which was fluid was remarkably thin and light coloured.

The sinuses of the dura mater were filled with dark coagula. The surface of the brain appeared covered by a complete net-work of vessels distended with light coloured blood. On the surface of each posterior lobe of the cerebrum slight extravasation had taken place. The brain was soft, and the difference of colour between the grey and white matter barely discernible. The vessels in the substance of the brain were gorged with blood, presenting, when it was sliced, a thickly studded appearance; the spots of a deep dull red, and in many places coalescing. There was a small quantity of fluid in each lateral ventricle, and along the floor of each were seen large distended blood-vessels. There was serous effusion on the surface and at the base of the brain, to the amount of about half an ounce.

A careful analysis of the stomach and its contents, with a view to discover morphia or meconic acid, was followed by negative results.

* New York Journal of Medicine.

TREATMENT OF BURNS.

To the Editor of the Medical Gazette.

Sir,

In two cases of severe burns of the hand, that have fallen under my care within the last three months, I have employed, with great benefit, the application of a single layer of lint soaked in a saturated solution of the "carbonate of soda." This simple remedy had the effect of completely relieving the distressing burning pain in the injured cutis, provided the part were kept constantly moist. In less than two hours all pain had entirely subsided, and the solution was no longer required.

I have conceived that, besides acting as a direct sedative upon the nervous structure of the skin, the carbonated alcali may possibly relieve pain by neutralizing the acidulous quality of the perspiration as it passes off through the irritated cutis.

As this information may prove perhaps useful in burns of a more extensive and serious description, by granting it a place in your instructive periodical you will much oblige, sir,

Your obedient servant,

Francis Peppercorne,
M.R.C.S.E.

3, Delahay St. Great George St. Westminster,
February 21st, 1844.

ANALYSES and NOTICES of BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

Principles of Forensic Medicine. Part I. and II. By W. A. Guy, M.B.

The great importance of the subjects treated of in the two parts of Dr. Guy's work now published, induces us to notice them, before the appearance of the third and concluding part; which, moreover, being intended to embrace toxicology, may well merit a separate discussion.

It is many years since any complete treatise on forensic medicine has come from the pen of any British medical jurist; and even such as were, at the time of their publication, tolerably comprehensive, have by the mere progress of time, and the advances of science, as well as changes in laws bearing on the points of medical jurisprudence, become inadequate to the requirements of the present day. The attempt to render the work of Beck, well suited as it may be for the American States, appropriate for English practitioners or lawyers, by notes of one editor after another, has only served to make it a mass of incongruities. We are well pleased, therefore, to find the entire subject taken up *de novo* by Dr. Guy, whose office, as well as the close attention he is known to have paid to many of the subjects individually, point him out as peculiarly well fitted for the task he has assumed.

The introductory portion of the first part contains some useful remarks on medical evidence, which should be carefully studied by every medical practitioner; for, we regret to say, there are few situations in which medical men appear to less advantage than in the witness-box. The remaining portion is chiefly devoted to questions connected with pregnancy, fœticide, and infanticide, matters which have been to a more than usual degree subjects of investigation of late, inasmuch as the operation of the New Poor Law has driven many unmarried females to attempt the destruction of their offspring; while the pressure of the times, and the difficulty of maintaining a family, have tempted even those living in wedlock to administer deleterious drugs to induce abortion. Every thing calculated to enable medical men to furnish the necessary information to guide the jury to a just inquisition, is supplied either in a tabular or other form.

Interesting and valuable as these are, they are less so than the contents of Part II. This refers chiefly to all points likely to be discussed when soundness or unsoundness of mind is the question. That some recent decisions in connection with atrocious crimes have lent an augmented importance to this subject, every one is aware; and no one can contemplate the probable result of the maintenance of the doctrines promulgated by the highest legal authorities, without dread. It has been already stated in this journal, that the late refinement touching monomania is the most alarming improvement ever made in psychology. All who coincide in this opinion must wish that the sentiment of the great and good Lord Hale, as quoted by Dr.

Guy (p. 267), prevailed in our courts of law—for we can scarcely designate them courts of justice—viz. "that all the circumstances of the case should be duly weighed, lest, on the one side, there be a kind of inhumanity towards the defects of human nature, or, on the other side, too great an indulgence given to great crimes." The refinement which consigns individuals to comfortable quarters in Bedlam, instead of to the gallows, does not appear yet to have reached Scotland, where, notwithstanding the fondness for metaphysical subtleties and distinctions, the judges allowed Barclay (p. 228) to undergo the last penalty of the law, whose plea of insanity was at least as valid as that of Oxford and his followers.

The remaining portion of this Part is devoted to questions concerning death, sudden, violent, or voluntary; these are very ably handled. In fine, Dr. Guy's work may justly be looked upon as one of the most beautiful applications of anatomical, physiological, metaphysical, and chemical knowledge, to the elucidation of points of great interest to society and individuals, which we have had the good fortune to meet with. Doubtless the profession will express their obligations to him, by immediately procuring and studying it.

MEDICAL GAZETTE.

Friday, March 8, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE MEDICAL PROFESSION.

A PURSUIT or calling must have in its nature something very valuable to mankind when its professors are treated with a large measure of personal consideration by their fellow-citizens, and its value must be still greater if that respect be shewn, notwithstanding that circumstances attending the exercise of the pursuit are offensive to the prejudices of mankind, or repugnant to the common notions of honour and glory. Medicine and surgery are of this kind—at least in a highly civilized community — for many of the studies required are repulsive to public taste, and many of the duties performed repugnant to natural pride. Strikingly contrasted is it in this respect with the profession of arms, every detail of which is associated with ideas of honour and respect. The notions attached, however, to the exercise of our art, in a rude and uncivilized state of society, are exceedingly different; and this fact, with the reasons which give rise to it, should be borne in mind by those who desire to reconcile the very opposite impressions which are current respecting our profession. It is interesting as a mere abstract philosophical consideration, but it may also be highly useful in giving a just notion of our true dignity, and allaying those feelings of impatience and discontent to which nearly all are at times liable, but which, of course, are most apt to torment those who have much leisure for reflection, and too little philosophy to make a wise use of it.

To the ignorant and the savage, the physician is an object of worship; to the soldier, and to the settler in distant regions, he is a needful ally—the repairer of grievous injuries, or the restorer to health and strength. The country practitioner has the advantage, such as it is, of this distinction in civilization. His function is necessary to those amongst whom he resides, and he receives the homage justly due to his acknowledged usefulness. His social position, therefore, need give him no uneasiness; he is of necessity, during the exercise of his office, the confidential friend of all who consult him; and if his personal qualities be pleasing, and his mind cultivated, he becomes, moreover, the chosen companion of his most cultivated neighbours. But even if he have not these

qualities, his professional value is fixed and acknowledged.

An extreme case once came to our knowledge of a man who was by choice the daily pot-companion of the miners amongst whom he lived, who often mortgaged part of his fee for drink in the lying-in room, and spent the rest on his road homewards, yet who was so necessary to his rude neighbours that he was hardly ever unemployed, for the persons of refinement in the vicinity were too few to support a better man.

In the metropolis, on the other hand, where competition is great, and where men of the very highest celebrity live within reach, the case is exactly the reverse: practitioners in general are, no doubt, wanted; but there is no practitioner in particular who cannot be spared. How many fractures would remain unset, how many fevers unphysicked, if one-fourth of the chariots which flash through our capital were, within a fortnight, to deposit their learned owners at the termini of the railways, never to return? There are no doubt at all times, even in London, one or two, who are as much above public opinion as the Bibo of the mining district, though some eccentricity or asperity of manner may be the most obnoxious quality displayed; yet even these are much for a patient to expose himself to voluntarily, where politeness and good taste are the general rule.

But between the two extremes, of coarse demand for mere professional necessities, and a fastidious craving for professional luxuries, lies the large field of ordinary labour—a field cultivated by the great body of general practitioners — men who are amongst the most intelligent and deserving members of the state—in whom the most solid moral and intellectual materials have been worked up with much of the polish of a refined education. It is they who chiefly suffer by any lowering of the professional standard in public estimation; and it is from the skill, the intelligence, the integrity, and common sense of these, that the public will form their ideas of the profession. From nearly all of the more public duties of magistracy and municipal government we have the privilege of exemption if we choose to claim it: it is only from those most wholesome and searching tests, private character and professional faithfulness, that society draws its conclusions with regard to us.

The real social position occupied by any profession will depend on the recognised demand which exists for its services, and the price which those services can command. This price includes not only the mere money value, but also the homage — the respect which men agree to pay to each other (Τιμη means both honour and pay); and this will settle and arrange itself according to rules which, though apparently capricious, are, in reality, as fixed as any other natural laws. It would be a very bad sign indeed were we not to set a high value on our services, or, what is the same thing, not to exact a proper respect for our persons or our offices; but it is idle to talk of securing this respect by *à priori* legislation. If medicine or surgery should ever again be as much in request as they were in the time of Homer, the Podalirius and Machaon of that day would be just as celebrated. It has been well remarked, that any regimental assistant-surgeon of the present day could have cured half the wounds described in the Iliad: that is very lucky for humanity, and much to the credit of modern surgery; but then these gentlemen must be content to have their names mentioned in the Gazette and the Army List; only one or two in a century get places in the Iliads of their time.

But is there really no honour for the Doctor in these our days? Assuredly there is; but he must know where to look for it: namely, in the respect due to his private and professional character—in the consciousness of honourable usefulness—in the absence of all trickery and meanness—in a cheerful performance of the duties required of him—in the daily attempt to increase the value of the profession to which he belongs, by additions to his own knowledge and the general resources of his art. More, infinitely more, we are convinced, is to be done in this way, than by all the public meetings that ever were held—all the committees that ever were formed—or all the petitions to Parliament that ever were indicted.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, February 27, 1844.

THE PRESIDENT, IN THE CHAIR.

An Account of certain Acute Diseases in the Throat and Larynx, one of which was cured by Tracheotomy. By JAMES ARTHUR WILSON, M.D. Physician to St. George's Hospital.

THE author commences by observing that, in the treatment of cynanche, the physician too often neglects the means which surgery affords for the relief of his patient, and that under the routine practice of bleeding, calomel, and tartar emetic, many have perished by suffocation, whom tracheotomy would have kept alive.

In Nov. 1830, he attended a gentleman of middle age, who died of cynanche, after three days' struggle for breath. The disease supervened on erysipelas of the chin, which succeeded an operation for the removal of some small warty tumors from the lower lip. On examination of the body after death, the epiglottis and posterior membrane of the tongue were highly vascular and thickened; the fauces and pharynx had a dull ashen appearance; their investing mucous membrane was soft and quaggy, from the infiltration of a dirty yellow pus in the subjacent cellular tissue; about the glottis the mucous membrane was disorganized, and beginning to separate by slough; the larynx, beneath the chordæ vocales, and the trachea in its entire length, were free from all thickening, undue vascularity, or other evidence of inflammation. About this time a woman died in St. George's Hospital, with symptoms of malignant cynanche, in less than twenty-four hours after her admission. In this case the pharynx was thickly covered with lymph; the epiglottis was thickened, but in the larynx the inflammation had not extended below the chordæ vocales. Thus, in neither of these cases had the organic lesion passed below the level of the glottis; it terminated exactly *there*, so that an opening made between the thyroid and cricoid cartilages would have afforded instant and entire relief.

This reflection, to which the author was led by the anatomy of the disease, became, he observes, of the greatest practical use to him thirteen years afterwards in the treatment of the following case.

Mr. W. C., æt. 27, complained of slight sore throat on the evening of July 7, 1843. He afterwards attended a crowded assembly, where he danced much and perspired freely. On his return home he was unable to sleep from uneasiness of the fauces, and a sense of choking. At 10 A.M. July 8th, he was seen by Mr. Tupper, who ordered leeches and calomel, and as no relief had been obtained, at 2 P.M. 24 oz. of blood were taken from the arm.

At 7 P.M. the author saw the patient, who was then lying on his back, and breathing with great difficulty; by gesture he complained of pain across the larynx; the respiration was hurried, and there was a stillness of manner expressive of a dread of all movement; he seemed, moreover, fast lapsing into a state of coma. The operation of tracheotomy was resolved upon, and at 9 P.M. was performed by Mr. Keate. By an incision through the integuments, the trachea was exposed beneath the thyroid gland, and then divided vertically to the extent of one-third of an inch, and through this opening a canula was introduced. Instant relief was obtained, but before ten minutes had elapsed he was attacked with violent spasms of the chest, with a struggle for breath, as if from immediate suffocation; all consciousness directly ceased. The canula was immediately withdrawn, and the orifice in the trachea cleared from blood, and kept widely open. The breathing at length became more natural, and the face resumed the character and tint of life. Not long after this a large quantity of mucus mixed with blood was rejected from the mouth, and it was then found that the patient again breathed through the larynx, when the canula was with caution finally withdrawn. The patient gradually recovered his consciousness, and expressed by writing that his "breathing was quite easy." He slept at intervals during the night, and was convalescent from this time. Early on the following day, the voice was in some measure recovered by a low stridulous whisper. The fluids taken

by the mouth reappeared on more than one occasion with bubbles of air through the orifice in the trachea. Seven days after the operation the wound was closed by granulation.

The author observes that "nothing is more worthy of remark in this case than the immediate suspension of all diseased action in the throat and larynx, consequent on the admission of air into the trachea. The strain having been removed from the inflamed structures, they soon recovered their healthy faculty of nutrition to the system at large, every draught of fresh air becoming at once specific, and the process of cure was complete." He states that, for the future, he should in all cases be urgent (where delay was possible) for a sufficient interval of time after the division of the integuments, in which to staunch the blood, before the final breach of the trachea. The instrument generally to be preferred for this purpose is the trochar, and the method of performing the operation has been fully described by Dr. John Wilson, in the 25th Vol. of the Transactions of this Society, in a paper of high interest, entitled "Cases of Laryngitis relieved by Operation."

Since making the above communication to the Society, the author was consulted by Mr. Frogley, of Hounslow, in a case of laryngitis, in which the life of the patient was saved by the operation of tracheotomy. The case was that of a young lady, about 20 years of age, who after suffering some days from "influenza," was attacked with symptoms of laryngitis. They were at first relieved by leeches, calomel, &c. but at 2 o'clock in the morning of Feb. 7, Mr. Frogley was called in haste in consequence of an attack of stridulous breathing; the pulse was scarcely perceptible; the countenance ghastly, and the symptoms generally those of a person fast dying from suffocation. Under these circumstances Mr. F. at once proceeded to operate. A small incision having been made through the skin, immediately above the sternum, the subjacent cellular tissue was separated, chiefly by the blunt edge of the knife, and the trachea divided with little or no loss of blood; with some little difficulty the canula was then introduced, and immediately on the first rush of air into the trachea, the patient opened her eyes, and exclaimed "Oh! now I can breathe." Her complexion soon resumed its natural tint, and her voice its proper intonation; she swallowed with ease, and soon fell asleep, breathing tranquilly through the canula, which was secured by threads and adhesive plaster. The author saw the patient at 4 P.M. of that day, and found her without complaint, save a little pain from pressure of the tube, and finding that no air escaped through it, he directed its removal. On the 21st Feb. a fortnight after the operation, the author was informed that "his patient was going on well; the wound all but healed, and she had not a single bad symptom." About 30 hours after the operation, she coughed up some dense membranous-looking phlegm, after which she did not breathe through the wound.

This being the Anniversary Meeting, the following address was delivered by the President:—

Gentlemen,—It is now my duty to take a retrospective view of the progress of our Society since the anniversary meeting in 1843.

First, of the financial report which you have just heard. The auditors are able to report favourably of the finances, even with the unusually large expenditure during the last year, for the increase and improvement of the library.

The additions to the library, by purchase, during the year, have been 100 volumes of foreign, and 60 volumes of English works; and by donation, the additions in the same period have been to the amount of 120 volumes.

Among the additions by purchase is the great and splendid work by Bourgery, on Human Anatomy, at the cost of more than fifty pounds. The Council, after much deliberation, decided upon the purchase of this work, which, from its costliness, is likely to be found in the libraries of but few private individuals; but which is so eminently useful as a book of reference on descriptive anatomy, containing, as it does, views of the regions of the body that are not merely repetitions of those already before the public, but very many of them wholly new, being the results of dissections which had not been before similarly displayed.

It appeared to the Council, from all the information they could obtain, that a reprint of the entire catalogue of the library would be of great utility. Accordingly, this work has been accomplished by our librarian, Mr. Phillips; and I am sure you will be disposed to accord your thanks to that gentleman for the considerable labour which he has so willingly bestowed on it.

I have the further gratification to announce the decision of the Council, that a copy of the new catalogue be presented gratuitously to each of the resident fellows of the Society upon application being made for it. The Council have been most anxious to decide wisely on this point; and it will be admitted to have required some consideration, when the fact is stated that, by the gratuitous delivery of the whole number printed, which is 500, the funds of the Society will suffer to the amount of something more than 150 pounds.

The present number of our resident fellows is 270. During the last year 35 fellows have been elected: a larger number has not been elected in any preceding year.

There have been received during the year the resignations of four fellows: Dr. Mantell, Dr. John Wilson, Mr. Samuel Cooper, and Dr. Roxburgh. Here are names which the Society will part with in regret, distinguished as they are in science. We can but wish that it had suited the convenience of these gentlemen to continue in the enjoyment of the advantages the Society affords.

Our list of deceased fellows contains the names of Henry Rumsey, Frederick Tyrrell, Dr. Macartney, Dr. Quarnier, Dr. Charles Thomas, William Money, and William Goodlad.

Henry Rumsey died in his 78th year, having practised at Chesham, in Buckinghamshire, more than 50 years. He is reported to have possessed an accomplished mind, and to have been, through his long life, an active cultivator of his profession; and there is evidence that this eulogy is well merited, in the paper which he published, exactly 50 years ago, in the Transactions of the Society for the Improvement of Medical and Chirurgical Knowledge, giving an account of Croup as it appeared in the town and neighbourhood of Chesham, during the years 1793 and 1794. It is generally acknowledged to have been a paper of great value, presenting, as it did, at a period when the peculiar features of croup were not generally known, an exact and vivid description of seventeen cases of the disease. It was of value, besides, as the means of introducing into practice the treatment of croup by emetics in doses to excite vomiting. Having related his unvaried failures by all other modes of treatment, Mr. Rumsey says he at length had the satisfaction of witnessing the recovery of a child after taking the tincture of squills and ipecacuan wine in such doses as to excite repeated vomiting. Another circumstance of interest in this paper is, that it introduced into this country the free exhibition of calomel, in addition to emetics, as had been adopted in America by Dr. Rush.

The professional career of Frederick Tyrrell is so well known to the Fellows of the Society as to render it unnecessary for me to enumerate the various public stations he so worthily filled. But there are points in the professional character of Mr. Tyrrell which call for particular notice on this occasion, as a just and proper tribute of respect to his memory. His life was one of incessant labour in the acquisition of scientific and practical knowledge; but it was the labour in which he delighted, urged on as he was by the conviction it must be the only safe road to professional eminence and public favour. His principles were good, and accordingly his conduct was unsullied by a single unworthy act. The result was such as he had hoped for. At the period of his premature death he was rapidly acquiring the confidence of his professional brethren and of the public; and it is because merit here received its just and appropriate reward, that this brief notice of our lamented associate may, it is hoped, be the means of awakening a feeling of emulation in the minds of the younger members of our profession. There are, in our Transactions, two contributions by Mr. Tyrrell; one in the 13th volume, consisting of remarks on a case of injury to the head; the other in the 21st volume, consisting of a paper on the treatment of acute purulent ophthalmia. His principal contribution to medical literature was the elaborate work on the diseases of the eye, faithfully recording the results of his experience in the treatment of these diseases through the long course of observation he had enjoyed at the London Ophthalmic Hospital, to which he had been attached more than twenty years.

Of the professional character of William Money I have been able to discover only one public record, a work published by him on Morbid Anatomy, which, although it possesses the very unattractive title of a "Vade-mecum," is, nevertheless, a work of merit, containing, as it does, above 250 drawings of pathological changes, with an account of the symptoms by which they were accompanied.

William Goodlad practised with much and deserved reputation for many years at Bury, in Lancashire, and, during the last few years, in Manchester. The professional character of Mr. Goodlad will be best estimated by the enumeration of his public works; they are,—

An Essay on the Diseases of the Vessels and Glands of the Absorbent System.

A Critical Inquiry into the Nature of Local Nervous Affections.

Papers in the Edinburgh Medical Journal on the Origin of Calculi—On Purulent Ophthalmia—On the Treatment of Scrofula—and a Case of Inguinal Aneurism cured by tying the External Iliac Artery. And in the 7th and 8th volumes of the Transactions of this Society are papers by Mr. Goodlad, relating to a Case of Removal of a large Tumor from the Face and Neck, in which the Common Carotid Artery was tied. Here are materials enough to shew that, although Mr. Goodlad's sphere of observation was remote from the metropolis, his mind was equal to the highest efforts of surgery. He tied the external iliac and the carotid arteries at a very early period after the introduction of these operations by Mr. Abernethy and Sir Astley Cooper.

James Macartney is the next in the list of our deceased fellows of whom it is my duty to speak. It seems probable, as has happened to many distinguished persons in our own and in other professions, that the early education of Macartney was not for medicine or natural science, but that he afterwards turned from the path which had been formed for him into another to which his genius and capabilities instinctively led him. The earliest notice of Macartney that I have been able to obtain is that, in the years from 1799 to 1802, he was zealously occupied in human and comparative anatomy at St. Bartholomew's Hospital, and that he was probably the first Demonstrator in its Anatomical School under Mr. Abernethy. There he did not long remain; and it is probable that he quitted London at that period to undertake the duties of surgeon to the Radnorshire militia regiment, in which he remained many years. An Irishman by birth, Dr. Macartney had not resided in Ireland from his youth until the year 1813, when he became candidate for the Professorship of Anatomy and Surgery in Trinity College, Dublin, and, from his high reputation, was elected in preference to numerous resident and other candidates. He retained this office twenty-four years; and, having resigned it in the year 1837, did not, I believe, engage in any other public duties. His death was sudden, at an advanced age, it is presumed from apoplexy, in March 1843. Sir Herbert Marsh, President of the College of Physicians in Dublin, informs us it had been arranged that Dr. Macartney should read a physiological paper at one of the evening meetings of the College, and that casually meeting him in the street on the day in which he was seized with his fatal illness, Macartney stopped to say that his paper was ready, and to inquire on what evening he should be required to bring it forwards. The name of Macartney will be transmitted to posterity as of one of the eminent physiologists of his time. And it is of some interest for us to know that he acquired this high reputation chiefly through the means of his zealous devotion to comparative anatomy. This was the labour of his life. When the Demonstrator in the dissecting-room of St. Bartholomew's, he was actively engaged in the dissection of animals, and he then commenced the formation of the museum for the illustration of the lectures on Comparative Anatomy which he afterwards delivered. The result of his labour, constantly directed to the object of attaining a knowledge of the structure and functions of organs in animals, was, that Macartney soon found himself able to announce the bold, as it was then untried, experiment of a course of lectures on Comparative Anatomy and Physiology. He gave such a course, through several years, in the Anatomical Theatre of St. Bartholomew's: and here it should be noticed was the delivery of the first distinct course of lectures on comparative anatomy in any of the medical schools of the metropolis. But the subject was then new; the interest and the importance of it were not then sufficiently apparent to induce many students to attend Macartney's lectures. The few who did so were, I know, highly gratified with the interesting matter he introduced into them.

Another result of Macartney's labours in comparative anatomy was the production of his elaborate contributions to Rees' Cyclopædia, composed almost wholly from his own dissections, and abounding in original matter. Such especially were the articles on the Anatomy of Birds and Mammalia, the former containing, with other novelties, the first account of the peculiar mechanism in the leg of the stork, and of other birds which sleep standing on one foot, whereby the leg can be preserved in a state of extension without muscular effort, also the first description of the plexuses of blood-vessels in the legs of birds analogous to those which Sir Anthony Carlisle had discovered in the limbs of the tardigrade animals.

In the year 1810, there appeared in the Transactions of the Royal Society, the important paper by Macartney, on Luminous Animals in relation to the Phosphorescence of the Sea, in which he gave the first complete account of the animals possessing the property of emitting light, endeavouring to ascertain from what parts of their bodies the light issues, and what are the circumstances influencing its emission.

The next work in the order of its importance which Macartney published was the Treatise on Inflammation, the scope and objects of which are sufficiently known to render it needless for me to dwell on them. But it deserves to be noticed that in this work is to be found the first scientific view of the use of water as a dressing for wounds, ulcers, and inflamed parts, the universal adoption of which is the best proof of its excellence, and consequently of the advantage it has conferred on the practice of surgery.

In the last year of his life, Macartney, with undiminished ardour in the investigation of minute structure, produced, in the Transactions of the Royal Irish Academy, his Paper on the Minute Structure of the Brain in the Chimpanzee, and in the Human Idiot, as compared with that of the Perfect Brain of Man, the object of the paper being to shew that in every part of the brain the white fibres are arranged in plexuses enclosed in the grey substance in the same manner that the coloured substances are arranged in the ganglia of the nervous system, and which view of the anatomy of the brain is confirmed by the best microscopic observers.

An old and much-valued friend of Dr. Macartney reports of him, "that he was an ever-active and inventive genius, quite an original thinker, that his lectures were full of ingenuity, and constantly changing from the new matter he supplied to them. Hence they were discursive, no two courses being exactly alike. Enthusiastic himself, his great delight was to make his pupils enamoured with the scientific pursuit of their profession. "He maintained besides," continues his friend, "the character of genius by another quality; he was rather contentious, and consequently was often in hot water: such, however, were his sterling good qualities that no man had more warmly-attached friends. He was not covetous of wealth, for he spent his all in hospitalities and scientific pursuits."

Among other objects of Macartney's zeal for the public good was the removal of the prejudice against dissection, and he missed no opportunity of effecting this. I remember to have seen in the Museum at Trinity College an iron vase, resting on a marble pedestal, and stated to contain the ashes of the heart of Dr. O'Connor, with the following inscription upon the pedestal:—"Preserved by Dr. Macartney in respect for the memory of the man who, freed from superstitious and vulgar feelings, bequeathed his body for the honourable purposes of giving to others that knowledge which he had employed for the benefit of his fellow creatures."

Such was James Macartney; a man of a high stamp, an ornament to our profession; and chiefly so, not from the discoveries he made, or the improvements he introduced into it, but because he worked zealously through a long life at the science of medicine, irrespective of considerations of pecuniary gain, in subservience to a nobler object, the interest of the studies in which it engaged him, and the gratification they afforded him. In the classification of men by Lord Bacon according to the various motives which urge them onwards in scientific pursuits, Macartney would take his station among the paucissimi, ut donum rationis divinitus datum, in usus humani generis impendant.

OFFICERS AND OTHER MEMBERS OF THE COUNCIL FOR THE YEAR 1844-45.

President.—Edward Stanley, Esq. F.R.S.

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NOTE FROM DR. WILLIAMS.

To the Editor of the Medical Gazette.

SIR,

YOUR favourable notice of my "Principles of Medicine" demands my best acknowledgments; but perhaps you will permit me to explain the meaning of some passages which you object to as "inadvertencies."

In the preface I state that "scientific men are not, and cannot, be practical, *because they have had no experience;*" and the object of this statement is to suggest the obvious remedy, that scientific men should get experience. "Philosophers must descend from their transcendental positions, to consider details of practice and purposes of utility." (Preface.)

The other passages objected to are, one in which it is stated that "a distinguishing characteristic of the pus globules is their want of cohesion" (§ 461), and another passage in 470, which is noticed as being inconsistent with the preceding quotation, inasmuch as it is there said that "obstruction to the circulation of the lungs and liver, and consequent circumscribed inflammation of these organs, result from *cohesion* and consolidation of the globules of pus contained in the blood." But the appearance of inconsistency ceases when it is mentioned, that the cohesion of the globules of pus mentioned in the last passage, according to the observations of M. D'Arcet, takes place only when the pus has been decomposed by the action of air.—I am, sir,

Your obedient servant,
C. J. B. WILLIAMS.

Holles Street, Cavendish Square,
Feb. 24th, 1844.

NEGLECT OF THE SICK POOR IN SCOTLAND.

To the Editor of the Medical Gazette.

SIR,

THE zeal with which you have advocated the cause of the Poor in Scotland, induces me to solicit you to give the following note a place in your valuable journal.—I am, sir,

Your obedient servant,
JOSEPH BELL,
Surgeon.

Barrhead, Feb. 1844.

Previous to the month of August last year, the managers of the Poor in this parish

(Nalston, Renfrewshire), not only refused to provide either medicine or medical attendance to the poor, but even almost universally declined to allow them the most trifling aliment when labouring under disease. The utmost starvation could scarcely obtain a single penny from the poors' fund. During last autumn, when our poor suffered intensely from epidemic fever, after much solicitation, the managers of the poor allowed the medical men the liberty of granting in extreme cases of poverty and distress an order to procure provisions to the amount considered necessary, which was to be paid from the poor's fund. Though this system of relief subjected the medical men to very considerable trouble, in addition to their unremunerated professional services, yet they most cheerfully submitted to the task, inasmuch as it enabled them to confer much benefit on their suffering and starving fellow-parishioners. We hailed it as a very great boon to the poor, and augured from the step, that a more considerate and benevolent treatment of the poor was in contemplation. But, alas, we have found that our hopes were too sanguine, that we gave too much credit to the poors' guardians, who seem to act as if they considered poverty a crime, and viewed the starvation of its victims the soundest policy, and the most suitable economy.

At a late meeting of these gentlemen, they ordered the medical men in a very unceremonious and uncourteous manner to discontinue affording any relief to the poor, no matter how great the necessity of the parties should be found. If the wants of the poor had become less urgent, there would have been some excuse for this harsh proceeding. I regret to say the necessities of the poor are undiminished, and the consequences of the step which our managers have now taken need not be pointed out. To make, indeed, any comment upon such an act would be quite superfluous. The fact merely requires to be mentioned, to stamp the parish of Neilston with the most heartless inhumanity. In truth, the circumstance is sufficient to degrade our social position, and to remove us to a state bordering on barbarism. In order that the readers of the Med. Gaz. may form some idea of the cases of poverty which occur in this place, I beg to subjoin, from my note-book, an instance or two, in which relief was afforded during last autumn.*

No. 1.—August 30, visited Widow M'L——. I found herself and two daughters, one aged about 16 years, and the other nine years, labouring under fever, and lying together among wood shavings, without any covering. They had neither blankets nor sheets; their shifts torn, and black with dirt. Another daughter, aged about 20 years, and a boy aged about six years, both convalescent from fever, sitting at the side of an empty fire-place. They had no fuel, and there was no furniture of any description in the house; every article had been sold to meet their exigencies. A daughter is employed in a bleaching work, but as she has only recently obtained employment, she has not as yet received any wages. Another daughter, who has just recovered from fever, has been working in a cotton factory since the 28th inst.

The family have not partaken of a morsel of food during the last 36 hours. I ordered them provisions to the amount of five shillings. On the 8th of September, I again ordered the same amount, as I also did on the 24th Sept., this making altogether fifteen shillings,—a sum trifling indeed when we consider the number of the family and the extent of their destitution. What, I would ask, is to be done in such a case? The only answer which can be given is, simply, that they must be allowed to starve and die.

No. 2.—August 31st—Mrs. M'Q.—I was requested to assist in operating upon her for ascites, this being the eleventh operation. She seemed to be in a most miserable condition both as regards her health and circumstances; has had no food to-day; has only some little oatmeal and a few cold potatoes in the house in the shape of food. We sent and procured her some brandy, which rallied her, and allowed us to proceed with the operation. She has resided in this place upwards of eight years, and has always been sober and industrious; is not on the parish funds; Her only support at present is a boy, aged 16 years, who only earns two shillings and sixpence per week, being not fully employed. When able herself, she picks cotton waste; but she has not been able to do much of late in consequence of her diseased condition. There is very little furniture in the house, and he body and bed-clothes are both scanty and miserable; in fact, little better than rags. She was ordered provisions to the amount of three shillings*.

Such instances may serve as a specimen of the cases in which relief was given by the medical men during the time they had that permission. I cannot help thinking that

* I beg to refer my readers who wish further information regarding the condition of the poor in this place, to a former communication which appeared in the Medical Gazette, for March 11, 1842.

* This poor creature has been twice operated upon since, and now is allowed one shilling and sixpence per week from the parish funds. Her house rent is about £3 per annum. *How much has she to live upon?*

the gentlemen who compose the Board of Managers for the Poor do not believe that such cases of distress exist at their very doors; otherwise they would never have withdrawn the assistance to which I have alluded. I really have too high a notion of the benevolent feelings common to human nature to think that any person could knowingly commit such a violation of them. Whilst I am thus disposed to place the most charitable construction on the conduct and motives of the managers of the poor, still the hardship and the misery of the case remains unaltered, and cries urgently to be mitigated. Ignorance regarding the state of the poor of this parish, whether pretended or real, can scarcely be pleaded in extenuation, especially when correct information can be so easily obtained. It is as much the duty of these gentlemen, who take charge of the poors' funds, to ascertain the condition of their poor fellow parishioners, as to distribute *sparingly* the funds at their disposal. The assessment is by no means heavy, viz. $4\frac{1}{2}$.d per pound of the rental. This, I believe, has been the highest rate. Consequently the amount of assessment cannot be urged as a reason in favour of the adoption of a resolution which is so derogatory to our common humanity, and so disastrous to the poor. I sincerely trust the managers of the parish funds will either immediately retrace their steps, or adopt some other mode of relief, and wipe away the stain which at present is attached to the parish of Neilston. I would not wish by any means to be looked upon as one of those bewildered persons who hold the monstrous doctrine that the poor ought to change positions with the rich, or that poverty is the result either of the oppression of the opulent or of bad legislation. I entertain equal contempt for those visionary schemes which have been proposed as means of pauperism from society. We are told by the highest authority that the "poor will never cease to exist in the land." We are informed from the same source, in language not to be misunderstood, the nature of our duty to those who are in want. Both are the statements of divine truth. "The Scriptures," says an able writer, "delight to represent the poor as the peculiar objects of the compassion and care of God. They dwell on their sorrows and afflictions; and they seek to preserve an interest in their favour, not only by direct pictures of their suffering, but by those epithets and expressions of kindness and regard which connect them habitually in our minds with all those views which keep alive and cherish respect and compassion. They throw around the sufferer a sacredness which even the remembrance of past misconduct is not allowed to violate. Even the most unworthy are in time of suffering presented to us as objects of our compassion."*

Thus, if we cannot prevent poverty, we can endeavour to assuage its pangs. It is equal madness, either in whig or conservative, to treat its victims as criminals. It is the duty of every man, whatever political opinions he may entertain, to minister, so far as his ability will permit him, to the wants of his fellow creatures. We are all joined together by certain ties of common brotherhood, and are all liable to change (and even that suddenly) our social position. Our maxim ought therefore to be, "to do unto others as we would wish others to do unto us." "He that contrives mischief," observes a quaint writer, "to another has all the reason in the world to expect it should return upon himself; for the prevention of which we should have recourse to that golden rule, 'Quod tibi non nis fieri, alteri ne feceris.' We are all made of the same mould, obnoxious to the same difficulties and dangers, and therefore had need to tread warily, lest we open a pit for ourselves to fall into. Little did Haman think that he was erecting a gallows for himself when he ordered one to be made for Mordecai. God often interposes, and retaliates the same measures to men who heap them upon others."

The late Dr. Macgill, in his "Discourses on Subjects of Public Interest," has justly remarked, "Charity, as it is the duty and true interest of man, is the best worldly policy, especially of the rich. There are other dangers to be guarded against in society, besides the idleness or improvidence of the labourer, and there are other and more pleasing means of inspiring a spirit of well-doing, besides that of treating men with severity, and speaking of them as outcasts."

The gentlemen who at present act as managers of the poor in Scotland do not seem to allow any such principle to guide their resolves. They appear to be actuated to a very great extent by the philosophic theories on the poor, advanced years ago by Lord Kaines†. In his schemes of poor-laws, his Lordship does not seem to think that any great evil would arise from a few of the poor dying occasionally of want. For the example of such unhappy persons left to perish "will tend," he affirms, "more to reformation than the most pathetic discourse from the pulpit." This doctrine seems, even in this the nineteenth century—the boasted age of *liberalism*—to have gained complete ascendancy over the minds of those whose duty it is to minister to the wants of the poor. But they should not

* Public Provision for the Poor, by Dr. Macgill.
† *Vide* "Sketches on Man."

overlook the moral contained in the fate of Perillus, the Athenian.

No person who has attentively perused the statements which have been recently published regarding the state of the Scotch pauper, can hesitate to exclaim with a profound and philosophic writer of a by-gone age—"The poor men's condition is very deplorable: the devil and the rich persecute them; and they are left to the rage of beggary, cold, hunger, thirst, sickness, and all manner of excruciating torments, which are, in many instances, heightened by their own depravity.—(*Burt. Melv.* p. 207).

CÆSAREAN OPERATION

SUCCESSFULLY PERFORMED

By Dr. Ziel, at Nuremberg.

Dorothea Spachel, æt. 33, four feet in height, deformed by rachitis, believed herself seven months pregnant, when she fell into labour the 23d May, 1843. When examined the waters had escaped. The spine was crooked; the right shoulder raised; the pelvis inclined forward and to the left; the right iliac crest raised; the femora curved, the belly prominent, and baggy. The vagina was moist and very narrow, and the finger easily touched the sacrovertebral angle. The os uteri was dilated to the size of a crown-piece. The pelvis was narrower on the right side than on the left; the anterior posterior diameter measured an inch and a half, the transverse was an inch less than natural. Baudelocque's measuring compass shewed little more than four inches from the os pubis to the spinous process of the last lumbar vertebra. The uterine contractions were strong; a portion of the head pressed on the orifice, but was not engaged. The fœtal heart was heard distinctly. Embryotomy seemed more dangerous than the Cæsarean section. This was therefore performed at 7 p.m. by an incision into the linea alba from the navel to the pubes, and a living male child of the full term extracted. The placenta adhered to the fundus uteri, and was easily and immediately removed. Very little blood was lost, and no vessels tied; a portion of omentum protruded, but was easily reduced. Five sutures and some long adhesive straps were applied without bandaging the body.

The woman did well, with the exception of a miliary eruption, and some suppuration at the wound, with sloughing of cellular tissue, and she went out for the first time on the 17th July. The infant also thrives, though not fed at the breast.—From the *Medicinisches Correspondenzblatt Bayerischer Aertze.*

CASE OF RHEUMATISM IN THE HORSE.

The subject of this case was a fine draught horse, working at a country mill in this vicinity; but, from arrangements of the owner, it was requisite that his horses should draw timber occasionally, which exposed them to the vicissitudes of the atmosphere, and often during the most profuse perspiration, as most in the profession are aware. During the wet and damp of November last, this horse, with others, had been more than usually exposed to the inclemency of the weather at that time. While occupied in drawing timber through some of those long and heavy journeys which often fall to the lot of a timber-carrier's team, there can be no doubt the sudden changes to which they are liable are often, if not always, the cause of this malady.

The horse which I have in view returned from a long and laborious journey on the 15th of November last, when every kind and proper attendance was paid to him by his waggoner, who left him that evening to all appearance in good health.

On the following day, the 16th, he was worked a short time about home, had his regular diet, and in the evening appeared in perfect health; but on the following morning, the 17th, he found him heaving at the flanks, and, on attempting to move him, was not a little surprised to find him almost a fixture. He had not eaten the whole of his overnight's food.

This was soon made known to the master, who, on seeing him, thought it might probably be an old nail left in his foot, which was setting up suppuration there, he having had a case of this kind not long before; so from this notion he was made to limp to the blacksmith's, on almost three legs, for a removal of the shoe. An examination of the foot soon convinced them that the disease was not there. Shortly afterwards I was called to him, and found him with a strong bounding pulse, accelerated breathing, coat fixed, extensive lameness of the near hind leg, with other concomitant symptoms of acute rheumatism.

I immediately bled to the amount of ten pounds, and administered a brisk cathartic ball. Fomentations of hot brine were appied to t he lame limb almost every hour.

18th.—Much better—lameness almost subdued—medicine operating well. Continue the fomentations of hot brine.

19th.—Lameness quite gone—the fæces almost of a regular consistence. Discontinue the brine, to which I attribute so early as cure.—*Mr. Monday*, in *The Veterinarian.*

EXTREME ATMOSPHERIC HEAT.

I HAVE heard fifty places picked out as the hottest in India, but Calpee certainly was always one of them. Heat to the human constitution and feelings is a relative term. Dr. Clarke mentions the heat of his marches near Jerusalem; he states the height of the thermometer at 102 Sechem. I have been encamped, with a considerable force, in the "merry month" of May, on the sands of Mynpooree, in the Doab, in excellent tents of double flies; yet in spite of taties, for there was seldom a breath of air, the thermometer rose daily to 125! I have, on horseback, hunted wild buffaloes at midday in the same month, amongst the rocky wilds of central India; but I have never felt any heat that could for an instant bear comparison with that of the latter end of June at Calpee. On a cloudy obscure day it stood at 145°. In the shade, even to a stager like myself, the temperature was awfully sickening; and so fierce that, long after sun-set, I was compelled to forego my constant practice of sitting out in the open air. At half an hour after sun-set, the mercury stood at 150° in the open air in the square of the cotton of go-downs. At ten o'clock at night, after endeavouring to obtain relief from a couple of well filled mussucks, the air (when my body was somewhat cooled) was still so heated, that I felt as if I had been quietly immersed in a hot bath.

During the season, several natives died of the *coup de soleil*. One drummer, with two young women, fell dead from this cause within a few miles of the city. The native remedy is unique: the patients (if it can be thrust down their throats) are compelled to swallow a mixture of unripe mangoes roasted and pounded with salt moistened with water. —*Travels in Upper India, by C. J. C. Davidson, Esq.*

CREOSOTE IN THE VOMITING OF PREGNANCY.

DR. PITSCHAFT has found by numerous applications, that the following pills constitute a truly specific remedy for the vomitings which so cruelly torment most women at a certain period of gestation.

℞ Creosote, 15 centigrammes; powdered hyosciamus, q. s.; distilled water, q. s.

Mix and F. S. A. a perfectly homogeneous mass, to be divided into nine pills (of about 10 centigrammes each) which should be covered with silver foil.

He preseribes three per diem (morning, noon, and evening).—*Chemist.*

GERMAN DIPLOMAS.

To the Editor of the Medical Gazette.

SIR,—Is it a fact that German diplomas can be obtained for £25? If so, is there no way of putting a stop to such a proceeding?

A CONSTANT READER.

London, March 4, 1844.

[It is but too true that the evil does exist. Can our correspondent suggest any mode of obviating it?—ED. GAZ.]

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, February 29, 1844.

J. F. Fegan, Cheltenham.—H. W. Watling, Leominster.—P. A. Jackson, Leamington.—R. W. Woollcombe, Devonport.—H. M. Champneys, Windsor.—H. Mitchell, Cambridge.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, February 24, 1844.

Dropsy, Cancer, and other Diseases of Uncertain Seat	107
Diseases of the Brain, Nerves, and Senses	173
Diseases of the Lungs and other Organs of Respiration	428
Diseases of the Heart and Blood-vessels	45
Diseases of the Stomach, Liver, and other Organs of Digestion	44
Diseases of the Kidneys, &c.	6
Childbed	0
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	1
Arthritis	0
Rheumatism	5
Diseases of Joints, &c.	4
Carbuncle	0
Phlegmon	0
Ulcer	2
Fistula	0
Diseases of Skin, &c.	0
Old Age or Natural Decay	89
Deaths by Violence, Privation, or Intemperance	18
Small Pox	19
Measles	18
Scarlatina	43
Hooping Cough	33
Croup	14
Thrush	2
Diarrhœa	7
Dysentery	1
Cholera	0
Influenza	4
Ague	0
Remittent Fever	0
Typhus	42
Erysipelas	3
Syphilis	0
Hydrophobia	0
Causes not specified	1
Deaths from all Causes	1115

NOTICES.

The papers of Dr. Mayo, Dr. Ritchie, Mr. Stafford, Mr. J. W. Earle, Dr. Duncan, Dr. T. W. Griffith, Mr. Hemmingway, Mr. Jones, Mr. Sherwin, Mr. Harding, and Mr. Patersone, have been received.

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FRIDAY, MARCH 15, 1844.

ON DISEASES ARISING

FROM THE

DEFECTIVE EXPANSION OF THE LUNGS IN EARLY YOUTH;

Being the Gulstonian Lectures at the Royal College of Physicians, delivered

By George Hilaro Barlow, M.D.

Fellow of the College, and one of the Physicians of Guy's Hospital.

4.—The manner in which narrowness of the left auriculo-ventricular orifice produces obstruction to the circulation in the lungs, and dilatation with hypertrophy of the right side of the heart, is too evident to require any explanation: we should, however, anticipate, in such cases, that as the impediment to the pulmonic circulation arises from an obstruction to the passage of the blood from the lungs, the seat of which obstruction is in the heart and not in the lungs, the development of these organs, and of the pulmonary artery, would not be so early arrested; and also, from the mechanical nature of that obstruction, that the injury inflicted upon the lungs and pulmonary artery, by the efforts of the ventricle to maintain the circulation, would be greater than in those cases which have been already noticed.

Robert M——, aged about 18, a patient of Dr. Bright's, in Lazarus ward. Admitted 23d of January, 1828. From his earliest years he had laboured under dyspnœa and palpitation of the heart. His face was livid; and it was thought by some that there was an opening either in the septum of the auricles or that of the ventricles. His pectoral symptoms became more urgent just before his admission; and at that time, or immediately afterwards, he became generally hydropic. The remedies employed were directed against this latter affection.

He died suddenly, four days after admission.

Sectio cadaveris shortly after death.—The head was not opened.

Chest.—There were strong old pleuritic adhesions on both sides. On the left they were generally diffused over the surface of the lung; but on the right they were more partial, forming bands and bridles, and admitting of a collection of a quart or more of serous effusion, by which the lung appeared to have been for some time compressed, yet not so as wholly to exclude air. There was much œdema behind the pleura costalis. The substance of both lungs was of a deep-red colour, remarkably firm, tough, and fleshy; but everywhere pervaded by a small quantity of air.

The pericardium contained several ounces of clear straw-coloured serum, unmixed with floating flocculi; but on the right auricle there were numerous small flocculent elevations of an opaque whitish colour, and which did not appear to be of very recent formation. The pericardium was rather injected; but this was probably from congestion.

The heart was large, greatly distended, and its extremity quite blunt. The increase of size was chiefly dependent on the right side, which was of more than double the size of the left, which was rather small than otherwise. The thickness of the parietes was about the same in both ventricles, those of the left by no means exceeding what was natural. The muscular structure of the right auricle remarkably developed. There was no opening in the septa. The edges of the tricuspid valve were considerably thickened. The chordæ tendineæ, towards the septa, were remarkably short, confining the valve back against it. The pulmonary artery was large, but its structure was healthy. Its valves were also healthy, but the corpora Arantii were very large. The auriculo-ventricular opening on the left side was much and rigidly contracted; the chordæ tendineæ being greatly thickened, and the indurated columnæ carneæ were attached to it, almost without any intervention of chordæ tendineæ.

The aorta was remarkably small, being about the ordinary size of the common iliac.

Abdomen.—There was a large quantity of clear straw-coloured fluid in the peritoneal cavity. The vessels of the peritoneum were injected from congestion. From the same cause the mucous membrane of the stomach was of a diffused and deep red throughout.

There were also obvious traces of congestion and inflammation in the mucous membrane both of the small and large intestines.

The peritoneal covering of the liver was thickened, rather opaque, and firmly adherent to the gland, which was puckered and contracted. The acini were of a light colour, preternaturally firm and hard. The spleen was large and firm. The kidneys healthy.

In the above case we have the hypertrophy of the right side of the heart, narrowing of the aorta, engorgement of the great veins, enlargement of the liver and spleen, with nutmeg degeneration of the former; ascites, general venous congestion, and anasarca, which were observed in the preceding classes; but here we find it recorded that the pulmonary artery was large, whereas, in the former classes of cases, it was for the most part small: the reason of which difference I believe to have been this,—that the defective expansion of the lungs not having been primary, but the result of the obstructed circulation arising from the rigid contraction of the left auriculo-ventricular opening, the development of the pulmonary artery was not so early arrested by the want of the natural stimulus to the lungs; whilst the obstruction to the passage of the blood being purely mechanical, the artery yielded before the powerful contraction of the right ventricle. Indeed, I am inclined to infer from the cases already described, as well as some which I may have occasion to adduce hereafter, that whilst pulmonary obstruction arising from defective expansion of the lungs, with narrowing of the air-passages, is accompanied or followed by narrowing of the pulmonary artery, that arising from contraction of the mitral orifice is for the most part attended by dilatation of the same vessel.

The following case, although death did not take place till the 44th year of the patient's life, is highly illustrative of the consequences of disease of the left auriculo-ventricular orifice occurring in early life:—

Lucy C——, aged 42, admitted under my care at the Surrey Dispensary in the summer of 1840. This patient had suffered from acute rheumatism when fourteen years old, and had from that time been always subject to dyspnœa and palpitation, both of which had latterly become much more urgent; and when I first examined her, there was a well-marked bellows sound accompanying the first stroke of the heart, which was loudest to the left of the left mamma. The impulse of the heart was strong, but the pulse at the wrist small. She was also at this time troubled with very great irritability of stomach, and could retain very little besides effervescing draughts. She obtained partial relief; but again became a patient at the Dispensary in the autumn of the following year. She was then suffering with her former symptoms, which had much increased in severity: there was also lividity of the countenance, orthopnœa, and occasional sickness, though the last was not so urgent as upon the former occasion. There was severe pain in the left loin, which was generally attended with sickness. The heart's action turbulent, with a double bellows sound; but, as far as I could judge, no friction sound: bowels rather relaxed: urine very turbid, from deposit of lithates: some œdema of the legs.

She obtained but partial relief, and died on the 8th of December, 1841.

The body was examined, in my presence, by Mr. Nettlefold and Mr. J. Miles.

Sectio cadaveris, thirty hours after death.—The head was not examined.

The lungs were generally tough and fleshy, especially the middle lobe of the right. Both lungs contained several masses of pulmonary apoplexy, which were most frequent in the upper lobes. There was considerable effusion into both pleural sacs.

The pericardium contained very little fluid; and, with the exception of a white patch on the surface of the attached portion covering the right ventricle, the membrane was healthy throughout. All the cavities of the heart were large, and their walls hypertrophied; but this was especially the case with the right ventricle. The tricuspid valve was rather thickened, and the auriculo-ventricular opening perhaps too small. The semilunar valves of the pulmonary artery perfect: the artery of large size. The mitral valve was much thickened, and the orifice contracted so as barely to admit the top of the ring-finger: from the appearance, however, of the valve and the orifice, it is probable that there was but little, if any regurgitation: the sigmoid valves seemed perfect. The aorta was small, but as far as it was examined, *i. e.* as far as the left subclavian, it was healthy.

The liver was large, and far advanced in the nutmeg degeneration: it was apparently beginning to contract. There were upwards of sixty gall-stones firmly impacted in the gall-bladder.

The kidneys were large, and appeared here and there slightly granular: this was particularly the case in the upper part of the left kidney, where there was a small angu-

lar calculus imbedded in the substance of the organ.

It would be easy to multiply illustrations of this kind; suffice it therefore to say, that in the last case we have an instance of the effects of contraction of the mitral orifice, both upon the lungs and the pulmonary artery, the diseased appearances being in other respects the same as before. It may, however, happen, that cases of a more mixed character will occur, and which may appear to belong at the same time to two or more of the classes which have been described. Of these, I am induced hastily to relate the following, which occurred in Guy's Hospital, under the care of my colleague Dr. Hughes, as it appears to throw further light upon the simpler forms.

James H——, aged 18, by occupation a whip-maker, a boy of short stature, admitted into Luke's Ward, August 20th, 1842. He states that he has had five attacks of rheumatism; the first and most severe occurring three years ago; the last, four months since: otherwise he has enjoyed tolerably good general health. His present illness came on about three weeks since, and without any assignable cause. He has always lived in London; and his occupation, laborious, required him to be constantly standing.

His aspect is dark and puffy. Abdomen large and distended. The liver is very large, its acute margin being easily felt as low as the umbilicus. He complains of pain on pressure at the scrobiculus cordis. Legs and scrotum are œdematous. Urine is not scanty, and of a straw colour, and not coagulable by heat. Tongue moist, and covered with a brown fur, with red edges. Pulse 110, soft and compressible. Chest is tolerably well formed, and resonant on percussion. On application of the stethoscope, the heart is large and powerful, the sounds being indistinct, and running into each other. Under the mamma is heard a prolonged bellows murmur; the second sound is there scarcely audible. On the sternum opposite the third rib is heard a *bruit de diable*, less loud and prolonged than the first, gradually increasing in intensity as the stethoscope is passed upwards in the course of the aorta. To the right of the sternum is heard a clear loud flapping first sound, distinct from the murmur previously named. The impulse is felt very distinctly in the scrobiculus cordis behind the enlarged liver, giving to the hand almost the feel of aneurism of the descending aorta.

He died on the 4th of September.

Sectio cadaveris.—I was not present at the inspection, but had an opportunity of seeing the heart and trachea.

There were extensive pericardial adhesions, some of them very old. The whole heart was large, chiefly owing to the size of the right auricle and ventricle. There was much deposit under the lining membrane of the left ventricle, chiefly near and around the auriculo-ventricular orifice, which was rigid and contracted: the mitral valve was likewise much thickened. The left ventricle was of rather large capacity, and its walls of moderate thickness: the sigmoid valves of the aorta much thickened; and when the aorta was laid open, appeared almost of a triangular shape, having their bases attached to the sides of the orifice: the aorta was very small. The right auricle and ventricle were large and thick, but the lining membrane and valves were healthy. The pulmonary artery was of normal size, relatively to the size of the subject; but was small comparatively with the size of the ventricle, though large in comparison with the aorta. The trachea was exceedingly small: it would not admit the end of the little finger, and would have been considered small for a child of ten years of age. The liver was myristicated. The genitals puerile.

This case presents a remarkable combination of disease of both surfaces of the heart, with defective development of the lungs and trachea, and at the same time illustrates the influence of the latter upon the size of the pulmonary artery, for although we had in operation a great amount of obstruction on the left side of the heart, to the return of blood from the lungs, so great as to lead a distinguished continental pathologist, who once saw this patient, to diagnosticate dilatation of the pulmonary artery, it was nevertheless of but normal size, as referred to the size of the subject, large in comparison to the aorta, small in comparison to the right ventricle. It was, in fact, large when compared to the trachea, small compared to the obstruction in the mitral orifice; showing, in short, the opposite effects of these two causes upon the size of the vessel.

I believe that it would hardly be in accordance with the intention of these lectures, were I to enter into minute details of treatment, but without transgressing my limits I think that I am at liberty to observe that, if the reasoning which has been adduced be correct, there are practical inferences to be drawn from it of no trifling importance; these inferences are perhaps sufficiently obvious, though their application will require considerable judgment and caution on the part of the practitioner. Now, it must, I think, be evident that, in the first class of cases, those, namely, in which obliteration to the pulmonary circulation arises from defective expansion of the lungs and air-passages, occurring as a primary affection, and where there is consequently no organic disease at the first, the therapeutic measures must of course have reference to the period of the affection, and may, therefore, be di-

vided into the preventive, the remedial, and the palliative.

And first as regards the preventive means to be employed. These will, I think, be most readily suggested by a review of the origin and progress of the disease. Thus, a young person about eleven or twelve years old is observed to be short-breathed, perhaps to be troubled with a cough, and to be rather bloated in the face, and is perhaps sent home from school on that account. Measures in themselves judicious are very likely adopted, and considerable relief is obtained. The child perhaps returns to school, and the mother and governess, or tutor, and very likely the medical attendant too, comfort themselves in the belief that, if a boy, "he will out-grow it," and if a girl, "that when a certain change takes place," all will be right; but, somehow it occasionally happens, especially if the patient be placed under unfavourable circumstances, or the original disproportion be great, that the boy instead of out-growing his complaint ceases to grow at all; or, the expected change in the girl never takes place; and hypertrophy with obstruction of the circulation on right side of the heart, with the train of symptoms detailed in the case of Mary Kendal, are the consequence; or perhaps the boy does in some measure out-grow his complaint, or for a time appears to do so, and the girl attains to womanhood; but cough and dyspnœa, with perhaps asthmatic paroxysms occur, at first, most probably, after considerable intervals, but afterwards more frequently, and for a longer continuance, and ultimately become permanent, and either carry off the patient at a premature age, or render life a state of protracted helplessness and suffering.

It is obvious that preventive measures are available only in early youth, before the different regions of the body have maintained that relative proportion to each other which they are destined to maintain during the period of maturity. Those which appear the most appropriate are, to endeavour to promote the development of the respiratory apparatus, to maintain a regular and moderate action of the other excretory organs, and to obviate as much as possible all venous congestion by regulating the amount of the circulating fluid.

For fulfilling the first of these indications, a pure air is absolutely essential. An atmosphere loaded with carbonaceous vapours, or the exhalations from organic matters in a state of decomposition, not only by its disagreeable qualities tends to repress the healthy action of the lungs, but also acts, as has been already observed, as a direct stimulus to the liver; whereas, a pure atmosphere, free from such noxious ingredients, and containing the due proportion of oxygen, is the natural stimulus of the respiratory organs, and must, therefore, tend to promote their healthy development.

It is, indeed, earnestly to be wished that an improvement in the drainage of many parts of our large towns, as well as increased facilities for ventilation in the alleys or courts inhabited by the lower classes, and a less crowded state of their houses, might exempt them from their present peculiar liability to this as well as many other forms of disease. At the same time, it ought not to be forgotten that the same noxious influences, though applied in a somewhat different form, are often to be found in operation amongst the children of the wealthier classes. The too close confinement to sedentary occupations; the crowding too many children into the bed-rooms at schools; the want of proper ventilation in school-rooms, and regulation of temperature; the neglect of all exercise in the open air, save a funereal procession round one of the squares of Chelsea or Brompton; the heated atmosphere of drawing-rooms at "children's parties" during the holydays, and above all the compression of the lower lobes of the lung by tight stays, or other parts of dress, are so many causes tending to arrest that development of the lungs and air passages, the accomplishment of which during youth is essential to health in maturer age.

Again, the regulated exercise of the system generally, as well as of the lungs in particular, must not be overlooked. The former not only by exciting gives tone and vigour to the vascular as well as the muscular system, but also, by increasing the rapidity of the venous current, calls the lungs into fuller action. It is almost needless to observe that if such exercise be carried to excess the effect will be one of the very evils which we are desirous of preventing, namely, the engorgement of the right heart; and therefore it is necessary that where there exists any tendency to the affection of which we are treating, all such exercises as produce palpitation of the heart, or any approach to lividity, should be carefully avoided. The inclinations of the patient, unless he be stimulated by emulation to perform some feat of activity or muscular strength, will generally be a sufficient safeguard. The exercise here recommended should also be taken as much as possible in the open air.

The advantage of exercising the lungs themselves is not perhaps in general sufficiently considered, yet no one can contemplate a child shouting in the mere joyousness of his young life and opening faculties, and not believe that he is obeying an instinct given by nature for some useful purpose. The advantage of moderate exercise of the vocal organs is equally great in early youth as in childhood, and perhaps the singing lessons are of some service in this respect,

though they do not generally commence at the time when the expansion of the lungs is of the most importance. Reading aloud is another means of expanding the lungs and air-passages; which is most benefical, unless carried to excess:—and thus the acquisition of the most useful and agreeable of accomplishments may be made subservient to health. Upon the importance of a careful attention to the state of the excretory organs in childhood and early youth, it is hardly necessary to insist: at the same time, it may be well to recommend caution in effecting our purpose; for it must be remembered, that over stimulating leads often to disorganization. When the evacuations appear to be deficient in bile, or there is any reason to apprehend congestion in the portal system, a mercurial purgative will be most beneficial, but it should never be wantonly administered. A free and regular action of the kidneys should also be maintained: where they appear to act sufficiently, the use of diuretics should be avoided; but if, on the contrary, there appears to be any deficiency in the quantity of the secretion, the least stimulating means for the encouraging it should always be preferred. The beverage known by the name of "Imperial" I have found of service. Should more active measures be required, the acetate of potass may be employed; and where there exists, at the same time, any tendency to inordinate action of the heart, the tincture or infusion of digitalis, in carefully regulated doses, may be added; but it perhaps belongs more to the remedial than the preventive means. The functions of the skin should also be maintained by uniform and moderately warm clothing; and the cutaneous circulation may be further assisted by gentle friction. Care should also be taken to regulate the quantity of fluids taken into the system; as the rapidity with which fluids are absorbed through the portal circulation may give rise to considerable embarrassment to the right side of the heart.

Secondly, of the remedial means. By these, I mean such measures as are calculated to restrain the increase of the disproportion when it already exists; and thus to allow an opportunity for the healthy relation of the several organs to be restored, before the period when growth ordinarily cases. It must be admitted, that the signs of the affection are obscure: at the same time, I think that we may not unfrequently have tolerably satisfactory evidence of a deficiency in the respiratory function, dependent upon the causes which I have pointed out.

To relieve the lungs, by exciting to greater activity the liver, the kidneys, and the skin, is, I believe, the first indication to be fulfilled in such cases. The next object must be, to control the action of the heart, and to prevent its embarrassment, either from a too great quantity of blood in the system generally, or its accumulation in the venous trunks; and, lastly, to favour the development of the defective organs, by such measures as have been already suggested. The means of fulfilling these indications must, for the most part, be left to the discretion of the practitioner. I cannot, however, pass unnoticed the great benefit which I have occasionally obtained from the combination of calomel, digitalis, camphor, and hyoscyamus. Moderate abstraction of blood will also be sometimes beneficial.

We must also bear in mind the liability of the patient to pulmonary apoplexy from any cause which may determine an increased quantity of blood to the right heart; and also to lesion of the tunics of the arteries, from any unusual excitement of the heart's action.

Thirdly, Of the palliative treatment.—When the organic changes, which have been described above, are fully established, the most that we hope is, to avert for a time the fatal termination, and alleviate the suffering of the patient by palliative means; which, however, cannot be expected to be of much avail, unless based upon a right understanding of the nature of the disease.

The great object, however, of relieving the lungs by means of the auxiliary excretory organs, should never be lost sight of: for this purpose, the bowels should be freely acted upon, and general diaphoresis maintained; and if free diuresis can be produced, we shall effect the purpose of carrying off redundant fluid, and thereby relieving the heart, whilst we are fulfilling the important indication just pointed out.

The principles which have just been laid down for the regulation of the treatment of the first class of cases, will, perhaps, apply with equal force to the second and third classes. In the second (that, I mean, in which the walls of the chest are morbidly contracted), as we never hope entirely to overcome that contraction, we must keep in mind that such a patient will always be unable to bear any condition of the system calling for a great amount of respiratory function.

The same holds good, that in third class, in which obstruction of the pulmonary circulation is the effect of pericarditis acting mediately through the impediment which it affords to the respiratory movements; but in our prognosis in such cases we must bear in mind the great difference between the consequences of pericarditis occurring before and after growth is completed; for in the latter case (as shown in the subject whose pericardium was found to be ossified), extensive adhesions may exist without any

serious inconvenience being the result, and in the latter the consequences are almost necessarily fatal.

In the fourth class, that I mean in which there exists morbid contraction of the left auriculo-ventricular orifice, the hope of affording much relief may appear still more feeble, and if we can expect to do so only by removing the structural lesion, it must be utterly desperate; but if we act upon the principle, that in this aperture, through which the whole blood of the body must necessarily pass, there is no room, indeed, for that of a muscular or very active system, but that the smaller current of a tranquil less developed one may be allowed to pass; and if too we bear in mind the importance of preventing the too sudden increase of the circulating fluid by due attention to the ingesta, and the power we possess of controling it by means of the various secretory organs, we may yet effect much, very much, towards prolonging the life, and mitigating the sufferings of our patient.

It may, however, be thought that, in considering any class of diseases originating in early youth, I have been guilty of a great omission in not having before made more particular mention of the effect which must be produced upon the system by the occurrence of puberty, and more especially the establishment of the catamenia in females. Now I am well aware that this ought never to be lost sight of in such cases; but I am of opinion that a sort of mysterious importance is too often attached to the function of menstruation, and that its occurrence is often hoped for in cases where, if it actually were to take place, it would be the worst thing that could happen.

The truth is, that the connection between the respiratory and genital organs is more close than is generally supposed, and has more especial reference to those classes of disease which I have been considering than is commonly supposed; for it has been recently ascertained, by Andral, that the daily quantity of carbonic acid exhaled from the lungs increases in both sexes pretty steadily from infancy to puberty; but that then we observe a remarkable difference: in the male it begins to increase more rapidly, but in the female its increase is entirely arrested, and remains stationary so long as menstruation continues; but that whenever this function is suspended, or when it permanently ceases, the amount of carbonic acid undergoes a considerable increase.

Now, if these observations are correct, it must follow that the menstrual function must act as a relief to that of respiration, and that, consequently, where it is suspended, the lungs must be called into increased activity; and, consequently, that, in the diseases which have been described, the suppression or non-appearance of menstruation must tend materially to aggravate the symptoms and hasten the fatal termination.

In confirmation of this view of the subject, I may remark, that in the case of Jane Gompertz, who lived twelve years after the first occurrence of the symptoms, menstruation was established, and continued regular for a considerable time; whereas, in those instances in which death occurred more speedily, it never took place, and that in the case of Lucy Castle, the original disease occurred at the age of fourteen, but that menstruation being established, the patient's symptoms did not become very urgent till about forty, the period at which that function began to subside. In the males, again, with one exception, the defective development of the lungs seems to have checked altogether that of the generative organs.

I had hoped to have been able to enter into the discussion of the second division of my subject, namely, the origin of tuberculous disease in the lungs in the period of early youth, from the increased function they are then called upon to perform, but the time compels me to forbear.

I am aware that many errors must have found their way into these investigations, and that need may arise for modifying many of the conclusions at which I have arrived in their prosecution; still, I believe that the inquiry itself is one of no ordinary interest, and I have thought it a fitting one to be the subject of these lectures; for although it may be the province of the physician to find safe counsel in the hour of immediate and impending danger, it is no less his duty to endeavour to foresee the storm which his art may be unable to quell.

RECORD OF CASES.

By Thomas Mayo, M.D. F.R.S.

Physician to the Infirmary of St. Marylebone.

[Continued from p. 615.]

On Intermittent Disease.

There is no more interesting subject in medicine than that of masked intermittents, under which the presence of periodicity entitles a train of symptoms, differing in every other point from those of ague, to receive with advantage the treatment belonging to that disease. But there is another view of this modification of disease, not less important: I allude to cases of the above kind, in which periodicity has been clearly established, but the treatment appropriate to intermittents is not borne.

Many years ago I was consulted in respect to a lady, who had for some time been in weak health, latterly with a progressive increase of pallor, feebleness, and emaciation; and, what was most important, a daily recurrence of pain and oppression of the head, with some delirium. The paroxysm occurred always at about the same hour, and lasted three or four hours. Her natural constitution had been good, her person strong, her temperament not nervous, her age about 43. She had undergone much treatment among other physicians; she had consulted Dr. Abercromby, of Edinburgh. On careful inquiry I found that, seven years before, she had had ague; and I was led to believe that the treatment of it had been incomplete. On this supposition I directed, after securing just action of the bowels, which had indeed never been neglected, that 50 drops of Tinctura Opii should be given at about an hour before an expected paroxysm; and that after it should have subsided, five minims of Liquor Arsenicalis should be given every sixth hour. I regret that I have not more copious notes of this case; but I can affirm that the plan was rapidly and completely successful. In a few weeks this lady was well, though weak. I should observe that a squamous eruption, which had existed for some time on the calves of the legs, disappeared also under the above treatment.

The above case illustrates the well-known effect of treatment regulated on a presumption that certain symptoms are referrible to the presence of ague, where nothing but their periodicity could suggest such a presumption. In the following case an imperfect analogy occasioned me to try the same practice with less success. The periodicity was established, but the treatment appropriate to intermittents was unsuccessful.

Peter Weller, a coachman, aged 60, of respectable appearance, thin, but muscular, dark in complexion, came into the Marylebone Infirmary on the 23d of May, 1841. He had twice, in the course of that afternoon, been attacked by vertigo and hemiplegia of the left side, with loss of speech, each time recovering the use of his arm and leg, and of his speech, in about the same degree. Cupping to the nape of the neck, to eight ounces, four grains of calomel h. s., and an aperient draught for the next morning, were prescribed by an officer of the house.

24th.—I found his pulse slow and oppressed; the hemiplegia had not then recurred; his bowels had not acted. I ordered—

Hyd. Chlorid. gr. ij. bis.

25th.—The paralysis had recurred this morning. Cucurb. cruentæ were immediately employed ad ℥vj. I found him relieved, but pulse still sluggish and oppressed. It is to be observed that the paralytic affection ceased as soon when depletion had not been applied as when it was.

Sumat Hydrarg. Chlorid. c. Jalap. gr. xv. statim; the bowels being confined.

26th.—Another paroxysm this morning. The attack comes on with rapidity; but he seems to know when it is coming on, his eye twinkling, then his mouth becomes drawn, then his speech and limbs failing; his head hot. The powder had freely opened his bowels.

Lotio frigida capiti. Liquor. Arsenical. ♏v.; Mist. Camphoræ, ℥iss. ter. Hydrarg. chlorid. gr. iij. o. n.

30th.—The attacks continue daily, lasting about an hour. Pulse 84 (it had been 65), of sufficient strength; less oppressed. Tongue dryish, and becoming coated.

Perstet.

June 1st.—Much the same. The attacks occurring early in the morning, let him take—

Pil. Sapon. c. Opio, gr. x. h. s.

2d.—Soon after the pills were taken he became very heavy, his head hot; the paralytic state came on gradually through the night, and did not cease in the morning; his pulse still 84, firm. 6 leeches were applied to his temples, and after them, immediately, 2 blisters. The arsenic was discontinued.

3d.—In a continuous state of aphonia and hemiplegia; pulse 76, strong. He understands what is said to him.

Hydrarg. Chlorid. gr. v. 6tis horis ad 3iam vicem.

4th.—Much better to day; gums affected. Pulse softer.

Mist. Ætheris Comp. ℥iss. bis quotidie.

6th.—The improvement, viz. in his looks, in the state of his pulse, and in his articulation, continues; but the hemiplegia of arm and leg is unabated. His state is no longer paroxysmal.

Hydrarg. Chlorid. gr. iv. h. s. Ol. Ricini, ℥ij. sequenti mane, are occasionally given when the bowels are confined.

Between this date and the 19th of June he experienced a slight attack of pneumonia. Towards the conclusion of this attack, which was treated with leeches and Potassio Tartrat. of Antimony, he perceived shooting pains in the left arm and leg, these being still motionless. On the 27th he had obtained some motive power in the leg, and about the same time much irritability of bowels occurred. This having been appeased by aromatic con-

fection, he was (July 2d), taken with extreme coldness, pallor, and *appearance* of depression; his tongue, however, good; his pulse 84; his skin rather hot. Out of these symptoms he emerged in a few days, Hydrarg. c. Creta being given twice a day with the confection, and resumed a pulse of 65.

During the period which elapsed from the above date to August 28th, motive power was gradually increased more to the leg than to the arm; his general health was also improving. From the 12th of July to the 28th of Aug. he was taking Strychniæ, gr. $\frac{1}{12}$ ter quotidie, with the omission of three days, during which his head having become heavy and his bowels confined, a blister was applied nuchæ, and fifteen grains of jalap with four of calomel were given. His bowels were otherwise kept open by colocynth pills. The urine sufficient in quantity, acid, and at no time albuminous. At this time I lost sight of this patient. He certainly was not yet restored to that integrity of power, which he was enjoying at intervals, when the dose of Pil. Sapon c. Opio changed, or appeared to change in the manner described, the type of his disorder, and gave it a very undesirable freedom from intermission. His diet was throughout unstimulating, and moderately nutritious.

Such was the result in the case which I have last described of a practice founded on imperfect analogy. The remedies applied to its intermittent phenomena met with a condition of brain which rendered them inappropriate, and, it must be confessed, injurious.

In regard to that case which I first narrated, I have been informed that the patient about three years after died apoplectic. Whether her death was connected with her past disorder I did not learn. Were this the case, the event may have been induced in either of two ways. The intermittent symptoms may have returned indeed, but may have been overlooked under cover of the cerebral disturbance; and this state may have been treated with misplaced depletion. Such had indeed been the treatment used, before I first saw the patient. Or, again, the remedies by which she was successfully treated under my care, may have been repeated under an altered and unsuitable state of the cerebral system. Thus used, they may have been as unsuccessful or pernicious, as a similar treatment would probably have been in the case of Weller.

Considerations of the above nature must be entertained if we would answer the practical question, what is that group of symptoms which, combined with periodicity, entitles the intermittent to be treated as an ague? a question forcibly suggested by one case, *inter alia*, which Sauvages furnishes. "T. R.," he observes, "had laboured under a quotidian for six months: after a night of prolonged restlessness, a paroxysm of epilepsy occurs at the same hour as, and in place of, the expected paroxysm of ague; and in this way, from that time, the disorder continued to run its course without any recurrence of the original symptoms." This case is valuable, not for its peculiarity, but rather as illustrating a *large* class, in which, the periodical character of the disorder remaining, the treatment by bark, or steel, or arsenic, &c., is questionable.

It has been judiciously observed, in regard to those intermittents in which the affection of a given organ is marked sometimes even more strongly than those symptoms which characterise the disorder as an intermittent, that the affection thus evolved or brought out by the miasma may require a special treatment, distinct from, possibly at variance with, that which its simple periodicity would suggest. In this point of view the supposed affection may be less appropriately called a masked intermittent than a tendency to phlegmasia, brought into an active state as often as the system is disturbed by the paroxysm of the intermittent. This disturbance of a supposed inflammatory nature may not, however, terminate with the paroxysm; but the system may be brought gradually into a condition in which the intermittent type may be lost, and a continuous disorder substituted.

The same discriminative tact is wanted here as in another equally indefinite disorder—hysteria—in which a phlegmasia may easily combine itself with the nervous affection: a view of the subject, I apprehend, far more frequently applicable than that suggested by the terms simulating, proteiform, &c. often used as descriptive of hysteria. The disorder which this hypothesis represents as *simulated* is really *existent*, and must receive its own treatment, modified by the judgment of the practitioner as he best may use it.

The above remarks may claim some

importance in relation to the present state of intermittent disease. Ague certainly has declined in frequency. But may we not in some degree exaggerate the effect of presumed improvement in drainage and cultivation of land as the cause of this diminution? Is it not in some degree a simple change in the form of an epidemic?

The frequently intermittent type of neuralgic disorders, their general susceptibility of benefit from those remedies which are specific in agues, is obvious. But it is scarcely conceivable that so great a change should be effected in some of the features of periodical disease as the substitution of headaches, or of an epileptic seizure, or of a nervous pain, for a rigor with its subsequent febrile accession, without grounds being, at the same time, afforded for a careful revision of our practice in these varied circumstances. Nor is this consideration weakened even by the remark of Dr. Macculloch, in his valuable work, "that the use of the most energetic remedies" is, in the neuralgic intermittent, "*precisely the same* as in intermittent fever."

The questions to which an inquiry of this kind would give rise are twofold. 1st, How far the specific remedies of ague preserve their ante-periodic influence under these altered circumstances of the disorder*?

2dly, How far this anteperiodic influence is, in such cases, safe or beneficial?

3dly, What other remedies have acted with apparent benefit in such cases, as ante-periodics?

[To be continued.]

CONTRIBUTIONS
TO THE
PHYSIOLOGY OF THE HUMAN OVARY.

By Charles Ritchie, M.D. Glasgow.

(*For the Medical Gazette.*)

[Continued from p. 740.]

Part II.

Dissections of the human ovary in individuals who had been pregnant, the ovaries being examined at different periods of utero-gestation, or after delivery.

* Dr. Hunt, in his recent work on Tic Douloureux, has exhibited an intimate acquaintance with these remedies in the above relation.

Section I.—*Ovaries of parties either supposed or really pregnant, examined before the completion of gestation.*

1.—M——, a very robust woman, brought into Fever House speechless, and died in twenty-four hours. In the uterus, which was not, however, more than usually vascular, was a cyst, of the size of a raisin, connected for about a third of its periphery with the anterior wall immediately above the cervix, from which it could be easily separated. Viewed with a common magnifier, it appeared to be a thin vascular bag, containing fluid, and enclosing, at its lower part, a circular vesicle, of about twice the size of a mustard-seed, while, throughout the cavity of the uterus, there was a considerable layer of dirty-looking jelly-like substance. Both tubes were very vascular, and full of the fluid found in them generally, having the colour and consistence of semen masculinum, or thin arrow-root, diffusible in water, and, examined by the microscope, consisting of innumerable very minute globules, aggregated into masses generally of an oval form, and differing specifically in appearance from the globules of blood, or pus.

First ovary exhibited, at one part, an old cicatrix, covered by a very thin white pellicle, and, at another, a small orifice, from which fluid escaped on pressure; and, corresponding with the former, there was, internally, a thin, empty vesicle, with inky coats, and with the latter, a more recently burst, and vascular flaccid vesicle.

In the *second ovary*, the tube of which was larger than the other, more vascular, and better filled with white fluid, which could be made to flow out copiously from the pavillon, there was an apparently recent opening, leading into a cyst of the size of a swollen garden-pea, filled with a clot of florid blood, and which consisted, first, of a distinctly-marked, delicate, transparent membrane as an outer capsule, exposing on its removal a granular-looking, whitish-yellow substance, enclosed within two other very delicate membranes, one being externally in connexion with the capsular investment, and the other internally in contact with the clot. Viewed from without, this substance had a convoluted look, and shone through its pellicular external covering precisely as the convolutions of the brain

do through the arachnoid. The pellicle was painted with exceedingly minute vessels, filled with florid blood, and in the sulci of the convoluted body were blue or dark coloured points, resembling very much the appearance presented, so far as colour and general effect, or contrast with the whitish convolutions is concerned, by the veins of the brain; while, viewed from within, the granular aspect and whitish colour of the convoluted body were exchanged for the appearance, as seen through the inner pellicle, of a uniform coating of an ash colour.

2.—Preparation 367 of R. R. Glasgow Hunterian Museum.

A fallopian tube conception at about the sixth week, with ovary of same side opened vertically along its centre. Situated deep in one of the segments of the ovary is an empty Graafian vesicle, which would admit a garden-pea, and on opposite segment is a small portion of the walls of the vesicle laid back. These are lined by a thin pellicle, which, at the bottom of the cavity, is indented into delicate grooves, without displaying any other appearance than might be supposed to mark an unbroken Graafian follicle of large size laid open by the knife in dividing the gland. External to both divisions of this cavity, and in each hemisphere of the ovary, are the segments of two long lemon-coloured bodies, of the kind described in this paper as cephaloid or cerebriform bodies, having the yellow matter traversed along the long axis of each by a white opaque line, formed either by thin internal pellicular lining membrane, or by lymph.

3. Preparation 52a of R. R. Hunterian Museum.

A uterus with both ovaries laid open, the inner surface of the former rough, and described in catalogue as a gravid uterus, and the latter as containing five corpora lutea, and some vesicles. In one of the largest of the former bodies contained in the right ovary there is a pellicular lining covering a thin film of convoluted yellow matter lying on the outer coat, which is thickened; but no contraction has occurred in this, or, with one slight exception, in any of the other cysts, which, as examined without dissection, appear to consist simply of an outer thick coat, having a delicate pellucid lining.

4. Mrs. C——. Had not menstruated for three months. Symptoms of menstruation, or of abortion, two days before death, of fever. Uterus slightly enlarged, and what was supposed to be a portion of decidua projected from its orifice. The left side of its inner surface was quite smooth, and free from any membrane; but in the right cornea, and adjacent to the extremity of the tube, was a vascular opaque bag, of nearly two inches in length, which contained loose blood only.

Right ovary.—Externally, two small orifices, both permeable to a bristle, but old; some cicatrices, and several shreds of recent fibrinous tissue, the result of inflammation. Internally, one of the foramina communicated with a cyst consisting of a delicate inner membrane, and a thin layer of convoluted, brainy, yellow, exterior substance, and containing a coagulum of red blood. The other foramen was connected with a similar cyst, but having its blood absorbed, and its coats of a coal colour.

Left ovary almost generally enveloped in a fine expansion of new tissue, and the corresponding tube, though pervious, was adherent to two hypertrophied Graafian vesicles, each the size nearly of a hazel-nut, which protruded from the free edge of the gland. The surface of this latter was smooth, and without any visible foramen, and at one part was elevated into a nipple-like point, of the size of a marrowfat pea, on cutting into which a rapid squirt of fluid, apparently reddish serum, escaped from it, and a cyst consisting of a large bed of convoluted, or granular, fatty-looking, yellow, brain-like substance, came into view, communicating, as was now ascertained, with the exterior by a minute opening, through which a bristle was introduced. In the interior of this cyst, but without any organic union with it, was a substance which resembled very strongly an empty Graafian vesicle, the walls of which had become opaque, thickened, elastic, and corrugated.

5. Mrs. P——, mother of several children; three months pregnant. Aborted during fever, of which she died. Uterus enlarged to about twice its unimpregnated size. Orifice about an inch in length, and admitting finger with facility. Tubes filled with white fluid, the left being perceptibly larger

than the right. Ovaries longer and narrower than usual.

Right.—Had externally three cicatrices with ecchymosed and still tender surface, the most recent perforated by a small foramen, which led into a partially obliterated yellow cyst, containing blood.

Left.—Proximal extremity occupied by an old cicatrix, and distal by a tumid and slightly vascular appearance, surrounding a capillary sized opening, having in its vicinity two minute vesicular elevations, like those which are seen under puberty, or during suppressed menstruation. A little transparent fluid oozed from the opening on the introduction of a bristle, and on cutting into this there was exposed a circular cyst, of the size of a marrowfat pea, within which, but without any organic or other connexion with its inner surface, was a whitish globular body, resembling in its aspect an empty thickened vesicle, and in its tissue the fibrin of the blood having the colouring matter absorbed. The cyst itself did not appear to have begun to diminish in size, and was of a rhubarb colour, its walls consisting of a delicate pellicle, covering the yellow matter, and not differing in respect to general appearance, thickness, colour, or structure, from those of the same bodies in the unimpregnated state.

5 A. Preparation 182, R.R. of Glasgow Hunterian Museum.

A uterus between the third and fourth month, injected yellow and black; the child seen through the amnion with its head pressing against cervix uteri. Right ovary contains a large triangular cyst in its free extremity, which consists of a cavity nearly the size of a small grape, lined by an opaque membrane, which, examined from its interior, has the appearance of a cobweb-like pellicle, and at its cut edges, and, as seen through the glass, that of a soft tissue, of about the thickness of silk paper, or of the amnion membrane; and exterior to this is a bluish, opaque, and, in some places, faint yellow-coloured, annular portion, of about the eighth of an inch in diameter, of a very delicate structure, permeated by black and yellow vessels, some of which have given way. No corrugation of the cavity has taken place.

6. ——, ——. Abortion at the fourth month; and death in a few days from fever.

External surface of ovaries pale; and exhibited some nearly faded cicatrices, and a few very minute, transparent, vesicular points, embedded in the peritoneal coat, along with others of a somewhat larger size, the vessels of which contained blood. The interior of the ovaries presented many similar ovisacs, and one thin, empty vesicle, the coats of which remained dyed yellow and black. The only other appearance was that of a fabiform, cephaloid body, seven lines in length, situated along the free edge of one of the ovaries, which, when cut through its centre, displayed in both of its segments a lateral fold of yellow matter from one to two-eighths of an inch broad, agglutinated in the middle, or the long axis of the body, by a white opaque line. The external investments of this body were of the most delicate description, and when separated by gentle tearing with the forceps under water, one pellicular coat covering the external aspect of the yellow matter was all that could be demonstrated. In the yellow matter itself no blood-vessels were detected; and on separating the white central line, each segment of the body opened up into a cavity lined by a cobweb-like membrane, constituting, when viewed unitedly, a cephaloid cyst identical with those found in the virgin female.

6 A. Preparation 180 R. R., Glasgow Hunterian Museum.

An uterus about the fourth month; the veins injected black, and the arteries red. A body in one ovary, formed of a semi-opaque, fawn-coloured portion, interspersed by vessels, and encircled by an irregular ring of veins particularly; while, from within, it has several white striæ penetrating it from an internal cavity, about the size of a pea, which is lined by a dense white membrane, the cut edge of which is nearly of the thickness of the paper called Bristol board.

7. Mrs.——, seven months pregnant; died of apoplexy thirty hours after delivery.

Surface of both ovaries covered with a great number of minute red vesicles; and in each ovary there was a corpus cephalodium of the size of a pea, one of which, near which were the remains of a recent cicatrix, was fresher looking

than the other; but both presented the convoluted brain-like matter seen in the unimpregnated female, only in a more plump, vascular, and organized state. The inner surfaces of both bodies were agglutinated together by an opaque, unorganized, cobweb-like, but consistent matter.

Unbroken Graafian vesicles, in various states of advancement, but all small, were seen in both ovaries.

8. Mrs. C., a phthisical woman, aged 25; seventeen hours delivered of a living child at seventh month.

Right ovary was large, and faintly marked with numerous superficial fissures; also with a very vascular cup-like depression, consisting of a hard florid ring surrounding a dimpled point, shewing a healed foramen in its centre. Another hard pisiform body, with a few vessels on its peritoneal covering, and, at a little distance from it, a deep cicatrix, having two minute red vesicles projecting from its surface, were the only other external appearances. Corresponding to the first-mentioned tumor there was, internally, a cephaloid cyst of the usual appearance, but inclosing within it a dense, opaque, empty vesicle, similar in structure to the corpora albida. The second tumor was constituted by a body having a remarkably massive development of the brain-like matter, but destitute of an internal opaque coat, or enclosed cyst; and under the deep scar of the exterior was a white body in process of absorption; and throughout the gland, numerous undischarged vesicles of various sizes.

Left ovary marked externally by Graafian vesicles of small size, either approaching the surface as bluish maculæ, or recently burst, and leaving a superficial blistered surface. Interior contained numerous vesicles, and two white bodies.

9. Preparation 52 R. R., Hunterian Museum. A woman who died undelivered in the ninth month of utero-gestation.

Ovaries contain three bodies, described in catalogue as corpora lutea. The uppermost is of an oblong form, and has a convoluted but very white tissue, with a deciduous or flocculent lining, and seems to be a cerebriform body deprived, by long immersion, of its colouring matter. The other two consist each of a central cavity, an annular coloured portion, and a thin capsule. The largest has a cavity of the size of a pea, which is surrounded by a dense, striated, reddish, stone-coloured matter, of about one-eighth of an inch thick; and the other is smaller, and the coloured ring, which is of about the same thickness, is of a bright yellow or orange colour, and is lined by an opaque white membrane, resembling the corpora albida of this paper.

10. A preparation belonging to Dr. Paterson, Professor of Midwifery, Anderson's Institution. A dropsical woman, who died of apoplexy in ninth month of pregnancy.

Ovaries large, and circumference of each copiously studded within and in the peritoneal coat with small-sized vesicles. Cicatrices nearly effaced from exterior. In one of the glands there was nothing else observable, but in the other there was an extremely white, convoluted, elliptical body, without a cavity, being the remains of a thin, brainy cyst, bleached by long maceration; and adjoining it was a globular body of the size of a recent marrow-fat pea, which had been divided through its centre, and which consisted of a cavity as large as a dried pea, lined by an extremely dense white membrane, and surrounded by a ring of light fawn-coloured matter, the periphery of which seemed circumscribed by imperfect traces of an investing capsule.

On more careful examination, the existence of such an investiture could not, however, be demonstrated; and the annular portion, which was of about the thickness of sheep-skin, presented an obscure linear, and, in some parts of its outer margin, a very well-marked brainy or convoluted appearance; and the internal lining or cyst was seen to have its general surface slightly furrowed and scabrous, as if from corrugation. This latter portion was easily separated, at its cut margin, from the exterior fawn-coloured or granular substance, and, on lifting it up, was found to consist of a very firm tenacious tissue, identical with that of the "dense white bodies" of these descriptions, and to have interposed between it and the fawn-coloured ring another, but much more delicate, although a very distinct and beautiful, layer, which could also be raised from the granular matter on which it lay.

11. A girl, aged 24. In latter end of ninth month of first pregnancy. Died, undelivered, of extensive chronic disease, and discharge of blood from stomach and bowels. Placenta attached to left cornu.

Right ovary somewhat lengthened and narrowed; external surface smooth; internal exhibited one white body, and numerous small vesicles, many of which were near the circumference, some elevated above it, one or two of which, as if recently discharged, left minute superficial openings.

Left ovary.—Periphery smooth, and free from cicatrices, with the exception of a number of elevations of small vesicles, and one or two capillary-sized shallow openings. On uterine end of gland was a tumor as large as a small raisin, of firm contexture, and having two varicosed tortuous vessels, filled with dark blood, traversing it externally, and a small foramen in its centre. On cutting this in two, its segments were found of a kidney shape, their circumference consisting of a fibrous tissue having its fibres running obliquely across, and of a pale slightly yellowish colour, which, on exposure to the air, became redder, and assumed something of a fleshy or pale muscular look. The transverse diameter of this ring was about an eighth of an inch; its inner surfaces were separated merely by a curved sulcus, lined at its bottom by an opaque pellicle, which presented the appearance of a white streak, bisecting the more central portion of the body in the direction of its length.

11 A. Preparation 43 R. R., Glasgow Hunterian Museum.

Ovarium with a portion of gravid uterus adhering. The tube is distended with spirits, and is larger at the end next ovarium than the barrel of a writing pen. Ovarium slit open shews a body of size of a hazel nut, with a cavity nearly as large, formed by an opaque, white, dense looking membrane, which is surrounded by a ring of shining, yellowish coloured, granular matter, of considerable consistence. Through the kindness of Professor William Thomson, the preparation was removed from the spirits and examined, when, at a point in the cut edge of the smaller segment of the ovarian cyst nearest to the surface of the ovary, the membranous body forming the walls of the cavity was found to consist of an internal thick, dense, white layer, lying on a distinct and well developed, more external, but much thinner coat, on the outside of which the solid granular matter was seen to be deposited.

11 B. Preparation 176 R. R., Glasgow Hunterian Museum.

A section of uterus and placenta adhering. The cells of the placenta injected red from the vessels of the uterus. Ovary contains a body surrounded by a ring of injected vessels, and of size of a large garden pea, which is formed of a quantity of extremely solid and beautiful yellow granular substance, enclosing a compressed angular-shaped material of about the size of a grain of wheat, having the colour, consistence, and appearance, of one of the white bodies of the ovary, occupying the cavity of the cyst, and squeezed together by the growth of the external granular tissue. None of the blood-vessels of the yellow substance penetrate the body, which, although in close mechanical apposition with its adventitious covering, and having one or two delicate processes shooting into its structure, and on these accounts is so firmly wedged as not to admit of being separated with any moderate force, is yet not organically connected with it.

[To be continued.]

CAUSES OF THE HIGH RATE OF MORTALITY IN LIVERPOOL.

"We must take great pains to shut our eyes upon truth. There is a radiance about it that makes the outline of its form perceptible, even amongst the clouds of dust and rubbish that are sometimes heaped upon it."

Three Experiments of Living.

To the Editor of the Medical Gazette.

Sir,

In a paper which appeared in the Medical Gazette of 29th December last, "On the Average Number of Deaths in Capital Operations," Mr. Halton introduces a critique on my pamphlet "On the Physical Causes of the High Rate of Mortality in Liverpool;" and he speaks in terms of disparagement of my evidence before the House of Commons' Committee on the Health of Towns, intimating his concurrence in the opinion that it is a

"foul and unmerited libel on the town."

I beg permission to call the attention of your readers to the singular inconsecutiveness of reasoning which pervades Mr. Halton's criticism.

It will be convenient, in the first place, that I should explain what he means by the following charge, which he makes at page 398, and which is somewhat vaguely expressed, viz. "That the conclusions which are drawn with respect to the general healthiness of the town are borne out even by his own tables, I must object." Here he does not specify the conclusions to which he objects, but from communications which I have had with him since the publication of his paper, I find that they are the following, viz. (p. 7,) "That, judging from the annual proportion of deaths to the population, Liverpool is the most unhealthy town in England;" which he thinks at variance with the admission (p. 60), that there is a district in Liverpool (Rodney Street and Abercromby Wards), containing upwards of 30,000 inhabitants, in which "the mortality is below that of Birmingham, the most favoured in this respect of the large towns of England;" while he thinks this admission inconsistent with the assertion (p. 62), "that the influence of these seats of pestilence is not confined to those who reside within their immediate limits, but extends itself to the whole town, poisoning the atmosphere which all classes are compelled to breathe," &c.

I also learn from Mr. Halton, that he knows nothing of my evidence before the Committee of the House of Commons, more than what my pamphlet discloses.

We are now prepared to discuss the subject.

First, as to my evidence before the Parliamentary Committee. The terms in which Mr. Halton mentioned it, led me to suspect, at once, that he had never read it; because I did not believe that any "thinking" man who had read it could join in the absurd outcry about its being "a foul and unmerited libel on the town." It now appears that my suspicion was well founded. Mr. Halton says, "I know nothing of the evidence more than what your pamphlet discloses." Now, my pamphlet discloses absolutely nothing as to the nature of the evidence, beyond the fact, that it related to "the prevalence of disease among the working classes, and the high rate of mortality in Liverpool," and that it was "a mere statement of facts."* But this is quite sufficient to decide him. He seems to have thought it impossible that I could open my mouth on such a subject without uttering a foul libel on the town; and he does not hesitate to pronounce judgment accordingly; either forgetting, in his haste to condemn me, or acting in defiance of the fact, that he knew nothing whatever of the nature of the statements he so unceremoniously stigmatised. Was this fair? Is it a specimen of the "close and consistent reasoning of a thinking man?"† Would it have been too much to expect that he should have made himself acquainted with the evidence before consenting to utter and to circulate such a "foul libel" upon it and upon myself?

I wish I could say that this were the only instance of apparent haste and want of care presented by Mr. Halton's paper. But I have a still more serious charge, if possible, to bring against him. I complain of his having entirely misrepresented the scope and object of my pamphlet—so completely and thoroughly misrepresented it, as infallibly to mislead all who have not read it, and thus had an opportunity of judging for themselves. From the general tenor of his observations, it would be supposed that I had attempted to connect the high rate of mortality with some defect in the locality of the town, or with some natural insalubrity of the atmosphere, which it would be of course beyond our power to remedy. Now, would any one, who took his impression solely from Mr. Halton's critique, believe, that the whole aim and object of my evidence before the House of Commons' Committee, of my Report to the Poor Law Commissioners, and of my paper "On the Physical Causes of the High Rate of Mortality in Liverpool," was to show that the high ratio of deaths was due in a great measure to the "vicious construction of the dwellings of the working classes, the insufficient supply

* Physical Causes, &c. p. 7; the only passage where my evidence is referred to.

† Mr. Halton's Paper, MEDICAL GAZETTE, p. 298.

of out-offices, and the absence of drains, the deficient sewerage, and the overcrowding of the population;"* these evils existing more prominently in some districts of the town than in others, but all of them susceptible of remedy to a greater or less extent, and that not a word is said of any natural insalubrity in the air, or in the locality of the town? but, on the contrary, that some of the natural advantages of the locality are expressly pointed out, and attention called to the comparatively low rate of mortality prevailing in the outskirts? Mr. Halton says, "the conclusion at which I arrive, after a perusal of the tables, is, that we are not to infer that the locality of Liverpool is unhealthy, but that"—what? some conclusion of course very different from mine?—"the atmosphere in particular districts of the town is very much deteriorated by the construction of the dwellings, the close manner in which the inmates are packed, and the filthy habits of the population," &c.; the very conclusions at which I had arrived, but which he presents to his readers as peculiar to himself, and at variance with the opinion which I entertained! Mr. Halton is the first, so far as I know, who has put this extraordinary interpretation on the pamphlet. Since its publication, I have received communications on the subject, from many medical men, and others, in different parts of the kingdom; it has been commented upon by all the local prints, and by several medical and other periodicals; and in no one instance has any other interpretation been put upon the pamphlet than that which it was intended to bear. I cannot ascribe his strange interpretation, therefore, to anything but undue haste in reading over the pamphlet, and possibly a desire to skim quickly over a rather dry subject.

After quoting, from page 62, a passage with reference to the mortality of Rodney Street, and Abercromby, as compared with that of Vauxhall and Exchange wards, he says, "Does this refute the statements of Dr. Dobson, Mr. Moss, and the Liverpool Medical Journal, as quoted by himself, and which he sets off with, resolved to overturn?" Mr. Halton will probably be surprised to learn that this was not the object of the passage which he quotes. Nothing was further from my mind than Dr. Dobson, Mr. Moss, and the Liverpool Medical Journal, when that passage was penned. Its object was entirely different. It was intended to show that, by sanatory measures properly applied, there was every reason to believe that the mortality of Vauxhall and Exchange wards might be more nearly approximated to that of Rodney Street and Abercromby wards than it now unfortunately is. But neither does it "confirm the printed records of the health of the town" (where they are to be found I know not); for if the mortality of Rodney Street and Abercromby wards be low, that of Vauxhall and Exchange wards is more than sufficient to give a high aggregate average to both districts; and Mr. H. leaves entirely out of sight the fact, that in every other district of Liverpool the mortality is high, although not so high as in Vauxhall ward.

The merit of refuting the "prevalent impression," that, "as compared with other large towns, Liverpool occupied a favourable place in the scale of mortality," is not due to me, nor was that the object of my pamphlet. That impression had been already effectually refuted by the short and simple story of the Registrar-general. His returns had proved that a greater number of deaths occurred in Liverpool, "in proportion to the number of the inhabitants," than in any other town in the kingdom; and my purpose in writing the paper which the Literary and Philosophical Society printed, was to offer an explanation of this—not, alas! "prevalent impression" — but ascertained fact. In preparing the paper, I succeeded, with some labour, in eliciting from returns furnished to me by the superintendent-registrar the various rates of mortality in the different districts of the town; and I endeavoured to trace a connection between the rate of mortality and the greater or less prevalence of physical remedial defects in the different wards of the parish. If any one point was made more prominent than another, in my pamphlet, it was this varying rate of mortality in different districts; it was my *great* point—the one of chief importance to my argument. And yet this very fact, which was made public for the first time in

* Physical Causes, &c. p. 20.

my pamphlet, Mr. Halton accuses me of wishing to conceal, or, at least, to make of secondary importance. The very passages he quotes, from pages 60 and 62, might have suggested to him that he had misapprehended my argument.

He objects to the *title* of my paper, for which he would substitute, "On the physical causes of the high rate of mortality in *particular districts* of Liverpool," which, he says, is all that has been proved. He can scarcely require to be informed that the rate of mortality in any town is ascertained by dividing the number of inhabitants by the annual number of deaths. This being done, for instance, in the case of Birmingham, London, Bristol, Manchester, and Liverpool, the rate of mortality in

London is said to be	1 in 37½
Birmingham	1 in 36¼
Bristol	1 in 32½
Manchester	1 in 29⅔
Liverpool	1 in 28¾

And, this being the result, all statists agree that, in Liverpool, the "rate of mortality" is high; the existence of one healthy district in a town not being considered sufficient to justify any departure from this rule of nomenclature, unless the deaths in that district were so few, in proportion to its inhabitants, as to give a low aggregate mortality to the entire town. But how is the fact with regard to Liverpool? Why, that even after giving the town generally the benefit of the low rate of mortality in Rodney Street and Abercromby wards, the general average, *i. e.* the "rate of mortality in Liverpool," is higher than in any town in England. In two wards, containing about 3,000 inhabitants, the mortality is low; but in the remaining *ten* wards of the parish, containing 200,000 inhabitants, it is high. The question is, are the two wards with 30,000 inhabitants, or the ten wards with 200,000 inhabitants, to give their character to the town? If, in a court containing twelve houses, two houses were healthy, and the remaining ten unhealthy, should we not be justified in saying that it was an unhealthy court? Or, if 200 out of 230 houses in a street were notoriously unhealthy, would not that be properly called an unhealthy street?

It will thus be seen that the assertion that, "judging from the annual proportion of deaths to the population, Liverpool is the most unhealthy town in England," is not, as Mr. H. supposes, at variance with the admission that the mortality of Rodney Street and Abercromby wards is low; but that the two statements are perfectly in unison. Nor is there, as he imagines, any discrepancy between this admission and the statement (page 62) "that the influence of these seats of pestilence is not confined to those who reside within their immediate limits, but extends itself to the whole town, poisoning the atmosphere which all classes are compelled to breathe," &c. I had supposed that the meaning of this was sufficiently obvious, viz. that while the influence of these seats of pestilence is *chiefly* exerted within their immediate limits, it is not altogether *confined* to those limits; and the evidence in support of this assertion was given in the shape of a table, constructed from Mr. Chadwick's Sanitary Report, which shewed that the average age, at death, even of the highest classes—those who abound most in Rodney Street and Abercromby wards—was lower in Liverpool than in any town where the calculation had been made, excepting Bolton (whose general average, however, is two years higher); the average age, at death, of the gentry in Bath, being 55; in Kendal, 45; in four metropolitan unions, 44; in Leeds, 44; in Manchester, 38; and in Liverpool, only 35. This difference in the average age, at death, (which is admitted to be a better test of the healthiness of a district than even its proportionate mortality)* must have some

* I extract the following from Mr. Chadwick's "Supplementary Sanitary Report," just published. "Wherever the presence of the causes of death has yet been observed to be very great, there the line of mortality, or the average age of death, is below what may be called the line of vitality, constituted by the average age of the living; and wherever there is, on the whole, any diminution of those causes of death, as by better ventilation, or by widening streets, opening new thoroughfares, better supplies of water, sewering and cleansing, and improvements in the general habits of the populatton, there the line of mortality, the infantile mortality especially, diminishes; the average age of each adult class, up to sexagenarians or octogenarians, increases, and the average age of death ascends above the average age of the living. * * * In Liverpool—where the investigations into the condition of the resident cellar population certainly shew an increase of the causes of death—overcrowding, defective ventilation, bad supplies of water, and increased filth—the average age of death is, for the whole town, 17 or 18 years only; whilst the average age of the living population, so far as it can be made out from the mode in which the census is prepared, is 24 years." (pp. 245-6.)

cause. The cause which I suggested may not be the true one; and yet it is desirable that it should prove so, because it is one that is susceptible of remedy; and Mr. Halton does not even attempt to prove that it is not the true one. All that is meant, therefore, by the statement at page 62, which he thinks inconsistent with the admission of the low rate of mortality in Rodney Street and Abercromby wards, is, that low as is that rate, it might probably be still further reduced by sanitary measures applied to the other districts of the town.

Mr. Halton can hardly have been serious in supposing that his appeal to his individual experience of the longevity of natives would be allowed to outweigh the accumulated experience of every individual in Liverpool, or that because he happens to be acquainted with two gentlemen upwards of eighty years of age, he is justified in denouncing the publication of officially authenticated facts as libellous, or "most unfair." Were I acquainted with a dozen natives of Liverpool upwards of eighty years of age, I should never dream that this could justify me in denying the statement of the Registrar-General, who tells us that a smaller proportion of the inhabitants reach the age of seventy in Liverpool than in any other town in England. Any one who trusts to his individual experience in such cases, trusts to a "vague impression," which is sure to mislead him. Besides, Mr. H. does not mention the "particular district" of Liverpool in which his octogenarian friends reside. Should it turn out that their residence (if in the parish at all) is within the favoured limits of Rodney Street, or Abercromby Wards, then a whole regiment of such octogenarians would, on his own showing, prove nothing as to the "general healthiness of the town." But let him tell me that he knows two such individuals who were born, and have passed their lives, in a filthy court or cellar in one of the other "particular districts" of the town, and I will at once admit that it is a circumstance worthy of record.

Mr. H. proceeds as follows:—"But that the general health of Liverpool is to be denounced because the general bill of mortality is swollen with the deaths of such poor who come here with already impaired constitutions and inherent maladies*, to be developed by a residence in the particular districts described, is most unfair. It is 'a foul and unmerited libel on the town.'" Now, setting aside the fact that he here begs the question, offering no shadow of proof of what he advances, Mr. H. admits that the general bill of mortality is swollen by deaths caused by inherent maladies, which are developed by a residence in the particular districts described; *i. e.* in badly sewered districts, abounding with filthy, ill-ventilated courts, and dark, damp, noxious cellars. Why, this is very nearly what I myself assert, and I ask, is it really "most unfair" to lay these deaths at the door of the town which cherishes such very "particular districts" within its bosom? I assert, that it is *not* unfair, that it is *not* a libel on the town. It is truth; plain, straightforward, melancholy, but wholesome *truth*. How his statement that it is a libel on the town to charge it with the deaths induced by a residence in these "particular districts," is to be reconciled with the paragraph which follows, where he admits that this great mortality is a "monster-evil, demanding the prompt interference of the local

* "As formerly, when navy surgeons, overlooking the filth of their ships, which has since been removed, and not perceiving the effects of the atmospheric impurities arising from the over crowding which have since been diminished by better ventilation, directed their whole attention to supposed distant causes and mysterious agencies, and were wont to ascribe the whole of the fever which ravages a fleet to infection from some casual hand, who was found to have been received on board from some equally filthy and ill-kept prison, where the gaol-fever had been prevalent; so now, in some of our towns, we find much ingenuity exercised to avoid the immediate force of the facts presented by such returns, by a search for collateral and incidental defects in them. Thus, in Liverpool, the whole of its vast excess of mortality has been charged upon the poorer passengers who pass through the port. In other towns also all the excess of deaths from epidemic or infectious disease is charged upon the vagrant population. In New York, and some of the American cities, a common observation made on the proved excess of mortality is, that a large proportion of "foreigners" frequent the city. An inquiry into the cases themselves would generally show that the proportion per cent. of sickness and mortality from consumption and other diseases, amongst the *resident* population, is the greatest; and that even in lodging-houses the disease most frequently appears first in the occupants who are stationary, and last in the new comers. In so far as the general results of mortuary registration of any district are disturbed by a population who are migratory, they are usually disturbed by unduly raising and giving the locality an appearance of an average of health, and the fatally deceptive chances of longevity, that do not belong to it.—*Supplementary Sanitary Report*, pp. 243-4.

authorities," and calls upon the corporation to prove themselves conservators of the public health," to apply a "zeal and energy" to the subject, and not to let "the plea of a want of funds stop the good undertaking," I leave it to himself to decide. To me they appear to be irreconcileable.

One word more with regard to his doctrine of "particular districts," on which he lays so much stress, and which, indeed, is the *ignis fatuus* which has led him astray. Suppose a party of twelve individuals wandering along the sea-shore, and overtaken by the advancing tide, ten of their number were cut off, while two only succeed in gaining a place of safety on a rock, high and dry above the raging waters. The ten unfortunate members of the party call aloud to the spectators on the shore for help. "We are drowning! We are drowning!" What would be thought of the conduct of the two perched upon the rock, who should say to the ten struggling wretches beneath them, "Silence! don't alarm our friends on the shore; they will think we are all drowning, but you know we have gained a place of safety; and, turning to the spectators, should cry out, "Don't make yourselves uneasy on our account; it is a mistake; we are *not* drowning; here we are, you see, safe and sound." And then, *sotto voce*, "It is true, that immediately around the rock are ten 'particular' deep holes, which have engulphed ten of our number, but that is no reason why such an outcry should be made while two of us are safe. It might excite threatening in the minds of our friends, and "operate to the disadvantage" of our characters as cautious and prudent men, if it were known that we had exposed ourselves and our friends to such a danger." I ask, what would be thought of conduct such as this, which, from a morbid and misplaced feeling of regard for their character and individual interests, should induce men to peril the lives of so many of their fellow-creatures? The comparison may be exaggerated, but can hardly be called unfair; for mischiefs which accrue in consequence of an obstinate refusal to open the ears when the presence of danger is announced, entail a nearly equal responsibility with those which are wilfully and deliberately incurred. "Error does not so often arise from ignorance of truth, as from unwillingness to receive it." I do not exactly say "*mutato nomine*," &c. for I cannot doubt that Mr. Halton, equally with myself, has the real good of the community at heart, and that we differ only in the steps by which we think it desirable to accomplish that object. He seems to think that the less that is said about it the better, while I believe that a knowledge of the evil is the first necessary preliminary to its cure; and that could he succeed in his wish to do away with the "fancy" which he says is now "abroad against the health of the town," he would be the unconscious author of a calamity which, when its results became apparent, he would probably be the first to deplore. It is a *wholesome* "fancy," and one which I am sure the "reasoning of thinking men," however "close and consistent" it may be, will never "dispel," if the steps which are now taking to remedy the evil should unfortunately be interfered with. I may fairly retort upon him his own expression in castigating another unfortunate victim of his wrath, "What! in the face of such frightful mortality as is represented, are we to exercise any reserve?"

I must be allowed to say something on behalf of the Literary and Philosophical Society, to whom, also, he extends the benefit of his lash. "Does it speak much for the acumen of the Liverpool Literary and Philosophical Society, who have published the pamphlet? Ought they not to have been the guardians of the character and interests of Liverpool, and not have been the means of circulating what has operated unjustly to the disadvantage of the town?" I think it *does* say much for their acumen, and redounds very much to their credit, that, embracing, as the Society does, men of every party, and every shade of opinion, they resolved unanimously—regardless of private interest, and of party feeling—to publish, at their own expense, what they believed would operate to the advantage of the community of which they are members. And in doing so, they have met with their reward. They have seen the dormant energies of the Commissioners of Sewers awakened to new life and activity, steps taken for the immediate shutting up of inhabited cellars in courts, notices given for the vacating of other cellars which are

unfit for human habitations, and the other clauses of the "Act for the Promotion of the Health of the Inhabitants of Liverpool," carried out with a vigilance previously unknown. Are these things to the "disadvantage of the town?" If they are not, I assert that the Literary and Philosophical Society has proved itself to be the *true* "guardian of the character and interests of Liverpool."—I am sir,

Your obedient servant,

W. H. Duncan, M.D.

Physician to the Liverpool Infirmary, and Consulting Physician to the Dispensaries.

P.S.—Should Mr. Halton desire further confirmation of my statements regarding the high rate of mortality in Liverpool, I beg to refer him to the remarks of the Registrar-General in his Fifth Annual Report, just published; pp. xxiv.-v.; to the tables, pp. xxv.-xxvii. and xxxiv.; and especially to the diagrams, pp. xxxvii.-viii.; shewing the comparative value of life in Surrey, Liverpool, and the metropolis.

ON THE RESULTS OF AMPUTATIONS.

To the Editor of the Medical Gazette.

Sir,

A December number of your journal contains a paper from Mr. Halton, of Liverpool, in reference to the mortality attendant upon the great operations of surgery. With his opinions on the subject I have no desire to interfere, but as he has done me the honour to refer to me several times in the course of his communication, it might appear, were I quite silent, that I acquiesced in the correctness of the conclusions he has drawn, though they are in many respects different from my own.

In 1837, I presented to the Royal Med. and Chirurgical Society, a paper on the Results of Amputation, in which it was shewn that the mortality was between 20 and 30 per cent. Mr. Halton thought that paper overstated the risk, and gave his own personal experience in proof that his opinion was correct. So far as his statement goes it shews that the results of operations in his hands have been favourable, but he has not given us the means of making any comparison between the success of his practice and that of other hospital surgeons: for this purpose the actual number treated should be given.

Mr. Halton gives us the results of his own operations, without stating the number of cases: thus, his mortality after amputation of the thigh is one in eleven, and no doubt it is favourable; but he well knows that he might throw up a penny and it might come heads ten times following, though the chances of its coming tails were equal, and that if he threw it up a hundred times no such inequality would exist. If in the course of his practice he should amputate the thigh a hundred times, I greatly fear he will lose more than nine patients. I have known a surgeon who cut twenty patients for stone, with only two deaths; but in the next twenty he lost six. I have heard of a very dexterous surgeon who lost seven cases of strangulated hernia in succession. And even in the Glasgow Infirmary, where the mortality is large, of the first 30 amputations attended to by Mr. Lawrie, 29 patients recovered, the operation being the circular. Of the last 30 the deaths were 8, and of a middle 30, the deaths were 11, though the flap operation was performed.

There is one paragraph in Mr. Halton's paper which clearly shews the force of the preceding remarks: he says, "In the lateral operations on the bladder, with a view to remove foreign body or stone, and the operations for applying ligatures on large arteries, in popliteal and subclavian arteries, I have merely to observe, that I have several times operated for aneurism including the subclavian, and for the removal of stone or foreign body from the bladder by the lateral operation, *but have no death to record.*" Is it intended that we should infer that he has tied the subclavian several times, and cut into the bladder many times, without loss? If so, why not say so? Because, as the passage stands, it might also be inferred that he has tied the subclavian once, and cut for stone three times, without loss, and there would be nothing very unusual in such a result.

Mr. Halton cannot acquiesce in the feeling which led me to determine to withhold the names of several hospitals included in the returns made to me, "because in certain hospitals the mortality after amputation had exceeded fifty-three per cent. whilst in several

it had not exceeded twelve per cent., and in one of the number, out of twenty amputations there was only one fatal result."

If I wanted any proof that I took a prudent course in withholding the names, I should find it in the fact, that in the hospital where the mortality was then represented by one in twenty, it is now represented by four in twenty; and in that in which the mortality was fifty-three per cent., it is now thirty-one per cent. Mr. Halton does not seem to have sufficiently considered the true value of figures, in which large numbers are necessary to dissipate errors.

Mr. Halton is dissatisfied with my reference to the extraction of ovarian cysts, and particularly with the following passage, "that an operation which under adverse circumstances has succeeded nine times in twelve cases ought to be resorted to." "We do not hesitate to have recourse to the ligature of large arteries, and regard it as a justifiable operation, though the results are less favourable; we do not object to perform amputation of the thigh, although nearly two out of five patients die;" and notwithstanding Mr. Halton's dissent, I apprehend the opinion I have expressed is correct. I have assisted at the extraction of five ovarian cysts, and four of the patients are alive, and I intend to shew in the sequel that I am not far wrong in my estimate of the results of amputation of the thigh.

It is a source of much satisfaction to me to reflect that I sought, nearly seven years ago, to direct the attention of the profession, more strongly than had previously been done, to the mortality attendant upon the performance of the great operations of surgery; and I am rejoiced to find that, ere long, we shall be in a condition to form a reasonable estimate of the risk in each case. My paper, which was read before the Royal Medical and Chirurgical Society, had reference to amputation; and the results were so unexpected in some quarters that the Council declined to publish it in their Transactions, believing, as they did, that some errors had crept into my tables, and had thus exaggerated the actual risk. Several years have since passed away, and several returns have been since made, among which, that of Mr. Lawrie, in reference to the results of amputation in the Glasgow Infirmary, is the most comprehensive and complete. Those returns go far to show that my communication at least did not overstate the loss of life after amputation. Few surgeons to whom the habit of enumeration is familiar, now dispute the substantial correctness of the estimate I then made. With some of the results then given I am not now satisfied; and I hope to be able to shew how far they are modified by the affected limb, as well as by the disease, or the injury, which has rendered the operation necessary. The means at present at my disposal to accomplish this object are not satisfactory: they are the whole, so far as I know, of the cases of amputation recorded in the periodical literature of this and other countries during the present century, amounting to 1369 cases, exclusive of those contained in my former paper, those in the practice of military surgeons, those of Lawrie, those of the Northern Hospital, Liverpool, and those of the Hôtel Dieu at Paris. I by no means think that the results furnished by such data will fairly represent the mortality. I believe it will be understated, because successful cases are more likely than unsuccessful ones to find their way into print. Such as they are I will now state them; and I may take another opportunity of giving the results of the operation for strangulated hernia, taken from the same sources. The results of the ligature of arteries were published in Mr. Arnott's Hunterian Oration.

Cases in which amputation was performed for the immediate relief of injuries.

	Cases.	Deaths.		
Thigh .	245	176	or	72 per cent.
Leg .	204	88	or	43 per cent.
Arm .	164	49	or	29 per cent.
	613	313	or	*51 per cent.

Cases in which amputation was performed for more or less chronic diseases.

	Cases.	Deaths.		
Thigh .	415	87	or	21 per cent.
Leg .	231	61	or	27 per cent.
Arm .	110	26	or	24 per cent.
	756	174	or	23 per cent.

The Glasgow returns are as follows,

* Taking an equal number of operations in each limb.

from 1794 to 1838:—276 amputations, 100 deaths, or 36 per cent.

A further analysis shews the following results:—

Amputations for injuries.

	Cases.	Deaths.	
Thigh	36	27	or 75 per cent.
Leg	27	18	or 67 per cent.
Arm & forearm	58	20	or 34 per cent.
	121	65	or 54 per cent.

Amputations for disease.

	Cases.	Deaths.	
Thigh	92	19	or 21 per cent.
Leg	35	12	or 34 per cent.
Arm & forearm	23	4	or 18 per cent.
	150	35	or 24 per cent.

The results of amputation at the Hotel Dieu, between 1st of Jan. 1836, and the 1st of Jan. 1842, according to Malgaigne, are—

For the relief of injuries.

	Cases.	Deaths.		
Thigh	46	34	or	74 per cent.
Leg	79	50	or	63 per cent.
Arm	58	25	or	43 per cent.
	183	109	or	*60 per cent.

Cases in which amputation was performed for more or less chronic diseases.

	Cases.	Deaths.		
Thigh	153	92	or	60 per cent.
Leg	113	55	or	48 per cent.
Arm	78	29	or	37 per cent.
	344	176	or	51 per cent.

A comparison of the results obtained from the sources I have named with those of the Hôtel Dieu, leaves a dark shade upon the practice of that hospital, the general results after injuries shewing a mortality of 51 per cent. in the one case, and 60 per cent in the other. For the removal of a diseased limb the probabilities of success after operation are still more unfavourable. In the former case they are represented by 23 per cent., in the latter, 51 per cent.

I believe, however, that our periodical literature does not fairly represent the results. I believe that the number of unsuccessful cases reported is no fair representation of their proportion to those which are successful. In relating or publishing the results of individual practice in established operations, it is hardly to be expected that a man will publish that he has been very unsuccessful, and therefore it is only the bright side of the picture that is exhibited. Where the archives of an hospital are ransacked, as was done for the Hôtel Dieu, and the Glasgow Infirmary, the successful and the unsuccessful results are equally dragged into the light. Large as the mortality at the Hôtel Dieu may appear, especially in amputation for disease, it is less striking when compared with Dr. Lawrie's returns of the mortality of the Glasgow Infirmary after injuries; the mortality in the former institution, taking an equal number of each limb, was—after injuries, 60 per cent., while at Glasgow, the proportion was 54 per cent.

If we add together the number of cases of amputations of the thigh furnished by the preceding returns, they amount to 987 cases, and 435 deaths, or 44 per cent.! My former statement, of 2 out of 5, was, therefore, no exaggeration, in so far as regards the thigh. If we take the Hôtel Dieu and Glasgow returns, it is under the truth.

With reference to such injuries of the limb as make immediate amputation of the thigh necessary, every surgeon will be prepared to confirm the gravity of the risk shewn by the return. It is obvious that where the amputation is called for by serious accidents, the injuries are frequently not confined to the limb; and this circumstance goes to some extent in explanation of the much more unfavourable results in such cases than in those where the operation was performed by reason of chronic disease.

There is one curious result; the smaller mortality in chronic cases when the amputation was performed above than below the knee: this fact is observable in Mr. Halton's return, as well as in those of the Hôtel Dieu at Lyons, during the surgeoncy of M. Janson, and in those of Dr. Lawrie. Another point, which cannot fail to impress itself on the mind, is the necessity of great caution in judging of results. If we assume the returns I have given to be correct, it must be obvious that the results should bear a direct relation, not to the number of operations, but to the nature of the

* Taking an equal number of each limb.

cases requiring operation. Suppose the case of two hospitals, one in a rural district, in which operations for injuries were rare, the other in a manufacturing town, where accidents from machinery were frequent. In the one case the mortality might not exceed 25 per cent., in the other it might not be under 50 per cent., and the surgeons might be equally able in each.

Mr. Halton refers to the large mortality of the Northern Hospital at Liverpool as compared with the Infirmary: how far would the reasoning I have used apply in this case? He states himself that the Northern Hospital was established as a convenience to those who suffered from accidents at the docks, the Infirmary being a mile off. Is it, then, a fact that a large portion of the cases taken to the Northern Hospital are severe injuries, many requiring amputation? If it be, the explanation of the difference in the mortality may be as satisfactorily given as by assuming that it is owing to the situation, the want of cleanliness, insufficient ventilation, or want of skill in the medical officers.

After the preceding observations had been written, I read a letter from the surgeons of the Northern Hospital in answer to Mr. Halton. Some of their explanations are similar to my own; but as I know nothing of the practice of either hospital beyond what is stated in their papers, my remarks can only have a very general application.

I am, sir, faithfully yours,

B. PHILLIPS, F.R.S.

Surgeon to the St. Marylebone Infirmary, Assistant-Surgeon to the Westminster Hospital.

HYDROPATHIC TREATMENT OF GOUT—FUNGOID DISEASE OF UTERUS.

To the Editor of the Medical Gazette.

SIR,

THE lamented death of Sir Francis Burdett brings to my mind a similar occurrence in my own practice, which with your leave I will relate.

On the 17th of January, 1835, Mr. H. Stephen, an officer of the Customs at this port, sent for me to prescribe for a swelling of the left foot and ankle, which he attributed to a slip or sprain: as he felt and looked well in other respects, it did not occur to me to ask any questions, and I contented myself with ordering a few leeches, to be followed by a cold lotion constantly applied. At midnight, I was summoned to him in great alarm, and found him coughing up, every moment, mouthfuls of fluid and frothy blood: he breathed with difficulty and great anxiety, with a rattling noise in the windpipe; the swelling and pain of the foot were quite gone. He was bled twice that day, and treated with antimonials, &c. and to my great surprise, on the third morning of my attendance, I found that all the pulmonary symptoms had vanished, and in lieu thereof the right foot was swollen and very painful; "*Gare l'eau*" became our motto, and the foot was let alone. It was his first attack of the kind, and in all subsequent ones you may rest assured that the hydropathic plan was not the one adopted. We have had no more hæmorrhage from the lungs.

Now, sir, my object in the above narrative is not to decry any particular system, but to warn the more zealous and conscientious votaries of hydropathy of the danger of repelling gout in certain constitutions: 'tis not enough for them to urge the example of physicians who have fearlessly plunged their gouty feet into cold water with the most perfect relief; facts are stubborn things. The fate of the worthy Baronet, and the incident now adduced, cannot be gainsayed. Your poor man is in no danger of having his gout repelled; 'tis your credulous rich, who are invited to these fountains of health. The cunning dogs care not for the sores of Lazarus, but are ready enough for a consideration to furnish Dives with water to his heart's content.

I further beg leave to offer the two following cases of malignant disease of the os uteri complicated with pregnancy, to which I would especially invite the attention of Dr. Lever, who has lately published an excellent little work on diseases of the uterus. Fungoid disease of the os uteri I am inclined to think is very rare, as I have not found, upon inquiry amongst our practitioners of most extensive experience, that they have met with it in this very populous district.

CASE. I.—Mrs. W. H., about 28 years of age, the mother of three children, of a fair and florid complexion and strumous constitution,

sent for me in October 1835, having flooded very much—to fainting. She was six months gone in her fourth pregnancy. Upon examination per vaginam no trace of the os could be felt, but in its place a large spongy mass of the consistence of liver, that broke down under moderate pressure of the finger. A slight pain or two made this substance split open in a radiated form; and then the head of the fœtus could be felt through the membranes. In consultation with a practitioner of great experience in this town, it was determined to draw off the liquor amnii, and bring on speedy labour, by way of obviating the recurrence of fresh hæmorrhage, which she was now unable to sustain without extreme danger. The next day the fœtus was expelled, driving before it a substance as large as a cricket ball. This woman died about six weeks after from exhaustion and fever; and upon opening the body the uterus was found to be nearly reduced to its ordinary size, and was healthy in its structure, except at the margin of the os, which was thick and circular, of the diameter of a half-crown piece, from whence a fresh excrescence was coming forth, of a grey colour, and very much resembling, in texture, colour, and appearance, the structure of an oyster.

Case II.—Mrs. Bateman, aged 30, a stout-made woman, but having a pasty, unhealthy complexion, was taken in labour at her full time of pregnancy. She had borne children before; had not suffered from any kind of discharge except a thin straw-coloured one during the last two or three months. An examination revealed a large tumor filling the upper part of the vagina, which broke down under the finger. In the course of half an hour the pains pushed forth the membranes, and thereby split up the tumor, portions of which, as the labour proceeded, were expelled, and when the vertex passed through the os uteri the whole mass was cut clean off, and pushed forth before the child. The labour was quite natural; the child was both fine and healthy, and is now living, for aught I know to the contrary. No unusual discharge occurred, and the woman recovered so far as to leave her bed and go about. I presented one of the portions of the tumor that were cast off to my friend Mr. Hardy, lecturer on midwifery in this town, who had it preserved in the museum of the Hull Medical School.

This woman, after consulting several physicians, some of whom were sceptical as to the true nature of the case (of which I had distinctly apprised her) died about six months after, with the vagina stuffed with a fresh growth of the same description. The specimen preserved shows the usual brain-like and laminated structure peculiar to malignant disease.

This last case is instructive, as proving that pregnancy (in the absence of dangerous hæmorrhage) may be allowed to proceed to the full term, and justifies the observation made by Dr. Lever, in his very able publication; for in my opinion the disease is limited, during pregnancy, to the os uteri, while the whole apparatus of parturition, which resides in the fundus, remains healthy and intact as long as the fœtus remains in utero.

Hoping that the preceding cases will prove interesting to your readers, I remain, sir, your obedient servant,

Henry C. Sherwin.

Hull, Feb. 28, 1844.

ON THE EFFICACY OF PRUSSIC ACID IN OPACITY OF THE CORNEA, &c.

To the Editor of the Medical Gazette.

Sir,

Having at a former period described a case of diseased cornea, treated by the application of the vapour of prussic acid, which was afterwards inserted in the Medical Gazette, I now deem it proper to state candidly that since then I have applied the vapour again and again to various affections of the eye, according to the ingenious method of Dr. Turnbull, without any bad effect being produced by its action on the eyeball or sight. But, as regards the chief disease or diseases of the eye, to which such a potent remedy is alone suited, it would, I conceive, be a question at present somewhat difficult to solve. However, justice meanwhile compels me to admit, that in no case which has come under my care, where the vapour was by itself applied, have I been so successful as in opacity or disease of the cornea, even although

* Number for January 13, 1843.

most of such were considered hopeless by the unfortunate patients themselves, and friends, on account of the means already used having proved ineffectual for the restoration of their sight.

I shall only give from my note-book a case in point, as follows:—

May 16, 1843.—Thomas Galloway, æt. 23, weaver, of a strumous diathesis. About eight months ago had an attack of inflammation in both eyes, to relieve which went to an hospital, and remained under treatment for about six months, without being benefitted, further than getting rid of the pain and redness. At present both corneæ are occupied with opacities nearly in the centre, and almost covering the whole expanse of the pupil, which renders him unable to read, or follow his usual employment. Had the vapour applied to both eyes daily, for the space of seven weeks; at the end of which, he could read a good type, and was also able to pursue his occupation.

I may state, also, that I have applied he vapour in two cases of amaurosis, along with the ordinary remedies in this disease, with considerable success.

In concluding these brief statements, purely with a view to make known to the profession the results of it in my hands, I cannot forbear expressing a strong belief, that, when cautiously and gradually applied, much good, as has already been done by the vapour of prussic acid in several forms of blindness, will yet be effected, and I doubt not for a moment to find it ere long ranking as a remedy of considerable efficacy in some of the more formidable diseases of the eye.—I am, sir,

Your obedient servant,
G. K. W. Patersone,
Surgeon, &c.

Perth, March 2, 1844.

CASE OF CALCULUS IN THE URETHRA.

To the Editor of the Medical Gazette.

Sir,

If you consider the following case worthy a corner of your valuable journal, I should feel obliged by its insertion.—I am, sir,

Your obedient servant,
John Fosse Harding, M.R.C.S.

Spencer Street, Northampton Square,
March 5, 1844.

I was suddenly called, early in the morning, to J. C., a youth aged 18, as he was suffering from a retention of urine; the bladder not having been relieved of its contents for upwards of twenty-four hours. On attempting to pass the catheter, I discovered that a calculus was impacted in the urethra, just posterior to the glans. As the patient was labouring under the greatest agony from the distension of the bladder, I introduced a small probe to dilate the urethra, which allowed of the urine passing. I then made an effort to extract the stone by means of a long pair of forceps, without success. I therefore made an incision through the glans, when, with the greatest facility, I removed the calculus, which proved to be of the mulberry species, of the shape and appearance of a tamarind-stone, weighing 25 grains. The wound healed readily, and within one week the lad was enabled to return to his vocation, and has since continued in good health, a period of eighteen months, although previously he had suffered from severe acute attacks of hernia humoralis, which were relieved by the usual remedies, but had left a chronic enlargement of the testes; and, in fact, his general health was much impaired. I am of opinion that the calculus had been lodged for some time in the prostatic portion of the urethra, as its shape would lead to suppose, and the symptoms generally, having had great pain in the perineum and rectum; but a remarkable feature in this case is, that at no one period previous to my being sent for had he been inconvenienced from retention, or even any difficulty in passing his water.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

Anatomical Manipulation; or, the Methods of Pursuing Investigations in Comparative Anatomy and Physiology. Also, an Introduction to the Use of the Microscope, &c.: with an Appendix. By A. Tulk, M.R.C.S., M.E.S. and Arthur Henfrey, A.L.S. M. Mic. S. with illustrative Diagrams. 1844.

We consider that we do an acceptable and useful service to our readers, in

recording our opinion of the volume the title of which is given above. We have looked through its pages attentively, and have been gratified to find that the work will be of essential benefit to the beginners of the study of comparative anatomy. The execution of the different parts is excellent; and we profess to speak from experience, having ourselves devoted much time to the investigations treated of in the volume, and had occasion to regret the want of such a guide as it affords. We venture to recommend the work strongly, especially to the heads of the medical departments of the navy and army, and to those who superintend the sending out of medical men to the colonies. Our brethren who visit foreign countries in the public service have leisure and opportunity for cultivating comparative anatomy and natural history, which practitioners at home do not enjoy; and we are not acquainted with any work which the authorites referred to (who have always been foremost in encouraging such liberal pursuits) can recommend so properly to gentlemen who are likely to enjoy good opportunities of cultivating comparative anatomy.

MEDICAL GAZETTE.

Friday, March 15, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

DECEASE OF SIR HENRY HALFORD.

IT is this week our painful task to record the death of Sir Henry Halford, which took place on the evening of Saturday, the 9th instant, at his house in Curzon Street, in the 78th year of his age.

Sir Henry had long suffered from occasional attacks of pain, occupying the situation of the nerves of the upper and lower extremities of the left side. These had latterly increased in intensity, assuming all the appearance of tic douloureux, and only yielding to full doses of opium. After a time the stomach gave way, when the emaciation and debility became progressive, till at length he expired in a state of extreme exhaustion, notwithstanding every effort on the part of his medical attendants (Dr. Seymour and Dr. Hawkins) to support him.

The deceased was born at Leicester, on the 2d of October, 1766. His early education took place at Rugby School, after which he went to Christ's College, Oxford; and thence, on the completion of his terms, he proceeded to Edinburgh, then in the height of its celebrity as a medical school.

Having thus finished an education of the highest order which the establishments of the country afforded, he settled in Leicester, practising jointly with his father, Dr. Vaughan, the most eminent physician in that part of the kingdom.

In 1792 he came to London, and very rapidly obtained extensive practice. In 1795 he married the Hon. Elizabeth Barbara St. John, second daughter of Lord St. John. He was created a Baronet by George the Third, and changed his name from Vaughan to Halford, in compliance with the will of his cousin, Sir Charles Halford, whose estates he inherited.

In February, 1793, he was elected physician to Middlesex Hospital, an office which, however, he held but a short time, having resigned it in December, 1800.

In 1820 he was elected President of the College of Physicians, an office which he continued to hold up to the period of his death, having been annually re-elected.

Sir Henry, as we have said, acquired an extensive practice very soon after he came to London, and for many years afterwards ran a course in this respect similar to Baillie's; while after the death of the latter, in 1823, he was for some time almost without a rival. He was

physician to four successive sovereigns, George III., George IV., William IV., and her present Majesty; while he also attended numerous members of the royal family,—and is said to have been consulted by several of the potentates of Europe.

Sir H. Halford possessed considerable classical and literary attainments, and was justly regarded as an accomplished gentleman. As a physician his excellence was generally regarded as residing chiefly in the power of prescribing for symptoms so as to palliate suffering, in which respect he far surpassed his rival, Dr. Baillie, whose excellence, on the other hand, lay in his greater knowledge of pathology.

Sir Henry was considerably under the middle stature, of intelligent countenance, and refined manners; indeed, in the opinion of many, the polish was such as to reflect the sentiments of those who approached him rather than to display his own.

Sir Henry certainly had a large share of professional zeal, and to him mainly, if not solely, is to be attributed the establishment of the evening meetings at the College of Physicians, which, for some time, proved so successful and attractive. Here were originally read most of those essays which he subsequently published, and the popular character of which rendered them extremely well suited to the mixed audience to whom they were addressed.

The following is a list of the Essays and Orations of which he was the author:—

On the Climacteric Disease.

On the necessity of Caution in the Estimation of Symptoms in the last stages of some Diseases.

On the Tic Douloureux.

Popular and Classical Illustrations of Insanity.

On the Influence of some of the Diseases of the Body on the Mind.

On the Καυσος of Aretæus.

Oratio in Theatro Collegii Regalis Medicorum Londinensis, ex Harveii instituto, habita die Octob. xviii., an. M.DCCC.

Oratio in Collegii Regalis Medicorum Londinensis Ædibus novis habita die Dedicationis, Junii xxv., M.DCCC.XXV.

An Account of what appeared on opening the Coffin of King Charles I., in the Vault of King Henry VIII., in St. George's Chapel, Windsor, on the 1st of April, 1813.

LONDON MEDICAL SOCIETY.

The 18th anniversary of this Institution took place last Saturday, Mr. Pilcher (President), in the chair, when an oration on the benefits conferred on science by the microscope was read by Mr. T. Bell.

The Fothergillian gold medal was then presented to Mr. Roberts; the first silver medal to Mr. Clifton, of Islington; and the second to Mr. T. B. Maurice, of Reading, for his performance of the Cæsarean operation.

The members and various friends afterwards dined together at the London Coffee House.

EXAMINATIONS FOR HONORS.

To the Editor of the Medical Gazette.

Sir,

You would do me a great kindness by inserting the following observations on the subject of Prizes in an early number of your journal.

I am, sir,
Your obedient servant,
W. F.

London, March 5, 1844.

I venture to bring the subject of examination for honors before those teachers whose agreeable duty it is to reward in some measure the deserts of the industrious medical student, in order that if the remarks which are offered meet their views on the subject, the close of the present session may show that they receive in a friendly manner any hints which may be given as to the modification of the examinations as at present conducted. There is a great difference in the mode of determining which student is most deserving of the chief honour to be awarded; in some schools, he who has written the longest essay on a given snbject, looking rather to quantity than quality, is selected; this is, however, not so commonly the case as it was a few years ago. Again, a candidate who has given the preference in

his essay to the opinions of his teacher, has thus, by a little of that potent ingredient, flattery, obtained a prize.

It will, however, perhaps be better to give the different modes of examination, and from these will be seen which is the most fair way, and by which the most *really* deserving student can obtain the highest honor. The examinations must necessarily vary according to the different branches of science; those mostly adopted now are—1st, *vivâ voce*; 2d, by writing an essay, with access to works written on the subject; 3d, by writing on a given subject, or subjects, no reference being allowed to books (the candidates being shut up); either in a given, or an indefinite time. These are the chief methods, being combined with a practical examination, or not, according to the subject.

The first is certainly a good way of testing a man's knowledge, and where the questions are varied and many, as in anatomy, midwifery, &c., it is, perhaps, the best; not, however, without a *practical* examination. The second plan is used by the candidates for the prizes awarded by the learned societies, &c., and is the only one which can there be adopted; in my opinion it is not by any means one for the examination of a medical student. The third is the one most frequently used, and is doubtless the best when combined with *practical* examination in medicine, surgery, &c. The mode pursued by the examiners at the University of London is generally agreed to be excellent, provided there be not too many subjects given, as was the case in the examination for honours last November, where the candidates had not nearly enough time given to answer the various questions as they wished to do. It seems better to limit the time, for a student can then write what is necessary, omitting much superfluous language, which another may feel inclined to insert; the objection to this chiefly is, the number of subjects for explanation too generally given: this, however, might be easily remedied. When no certain time is allowed, this mode of examination is sometimes abused by making it the means of accumulating "writings," heaps of paper filled with wandering descriptions of disease, rather than, as it ought to be, a concise and practical treatise on the subject required. How much better would it be if the professor of medicine would give for a subject *one*, instead of *all* the diseases of the chest and head; or the teacher of surgery *one*, instead of *all* the following, diseases of the testis, urinary organs, diseases and injuries of bones, &c. which is too often done. I know that candidates for a prize have been obliged to remain shut up in one close room for *sixteen hours* before they could finish the task allotted them, and this for two days in succession. This seems as if the Professor wished to get as much as he could in exchange for his prize, or even as if he thought he may altogether evade giving his prize, hoping that the candidates would be unable to accomplish the necessary task. Practical examination, however, is, I hold, the most necessary, as well as the most fair, in every thing. In anatomy it is generally used; not so, however, in medicine or surgery; and in one of the schools the successful candidate for the midwifery prize (that most practical of all practical subjects) had never attended a case of parturition.

Surely, in the examination in surgery, a subject might be obtained for the candidates to have an opportunity of showing their manual dexterity and skill. The wards of the hospital will always furnish patients whose cases the candidate for honours in medicine may be required to diagnose and explain. Indeed, I cannot fancy that any teacher who really thought the awarding a prize was at all a matter for consideration, would determine without an examination by this means.

I now come to that part of the subject which is, in my opinion, very important as to the amount of honour which a prize confers on the receiver; and I wish to call particular attention to this point, namely, the impropriety of allowing all of the pupils to contend for the prize; and I deem it the more necessary to allude particularly to this, as in the list of awards we constantly find the names of those students who have devoted their whole time to one branch of study. The plan which is now adopted in many of the schools—I think I may say in all—of making a division of the anatomical class into a senior and junior, is a very good one, and it is to be regretted that it is not followed in all the classes, for many abuses would then probably cease. I put it to the sense of any one, whether it is fair and honest that all pupils should be allowed to contest a prize? Is it right that one should have an unfair advantage over another, as I will show some have? Now there are many of the students who have the very great advantage of residence in London, and to whom, therefore, the chief part of the expense incurred by those who live in the country is wanting. These are, therefore, able to give much more time to their hospital attendance, and instead of three years they have the privilege of attending five or six years, or even longer than this. It is obvious that there is great advantage to be obtained by this, and one effect is to give an unfair superiority, in regard to prizes, over the student whose stay in London is limited. The resident London student, as he is called, often attends to one branch of study every year, and thus, by giving his attention to the subject, must be better pre-

pared for an examination, and consequently will generally obtain the prize. On the other hand, the student whose time is limited must attend each year to a variety of subjects; for instance, during his first winter, lectures on anatomy, chemistry, materia medica, and surgery, are to be attended; and although his general knowledge may be much more than that of his opponent, he may be defeated in each trial to obtain a prize. I could instance many who have thus lost prizes. I have, I think, shown that this is very unfair; but there is yet another circumstance, with respect to senior pupils, which may be mentioned. It is often in the power of one man to pass his examination at the College at the end of his second winter, and he therefore has an an opportunity of devoting all his third session to those subjects the prizes on which he is allowed to compete for, such as medicine, midwifery, &c. Again, if a man passes the Hall, he is not disqualified to try for the surgical prize, having an opportunity of giving up his whole time to this branch of study. This also seems to me to be most unfair. There is only one mode of examination which would effectually prevent partiality, and this consists in having an examination at the end of each session, for first, second, and third year pupils. These examinations should be general, and of what they consist may be easily determined by the teachers. This is, I think, the only fair and honest method of testing a man's proficiency; and I would add, it is not one branch of study alone that makes a good practitioner of medicine or surgery, but it is the practical knowledge and experience (for a pupil of twenty-one may have great experience) which he has obtained, by the only method of information which is truly valuable, when compared with others, namely, the study of disease in the wards of the hospital, and at the bed-side of his patient.

One word with regard to the prizes. Medals are now much in fashion, but how many students would far prefer books or instruments, as being much more useful. There are generally one, two, or three prizes, and certificates, but how much more valuable are these at one school than at another! I see in the list of prizes published in the Gazette, May 1843, a teacher of surgery at one of our schools gave one prize only, *and no certificate;* at another, where certificates abound, as many as *twenty* have been distributed. Now, it may be thought that one certificate is as good as another, by those who are not aware of this vast difference in number; but how much more valuable that single one, where only one is given, is, than one out of twenty, I leave them to determine. It is very hard, because one certificate (which is the usual number with one professor) has been given, two or three candidates who have passed an excellent examination, a very little inferior to the best, should not be noticed; it would, in my opinion, be proper to exceed the usual number, rather than not grant the reward to merit.

I have thus very imperfectly given my opinions on the subjects of prizes, and I do not think I shall say too much if I add, that many students anxiously look for some alteration in the system of prize distributions. I have hopes that the different teachers will pardon me, if they think I have at all infringed on their peculiar province, and if any of the observations I have made meet their views on the subject I shall be much gratified. I trust that in future there will be no ground for mistrusting the impartiality of the teacher, or the qualifications of the successful candidate; and that prizes will become, as they were originally intended to be, the mark of approbation of the teacher, and of merit and qualification of the pupil, and not the sign of good fortune obtained by the one, or the constrained gift necessarily bestowed by the other. Truly useful shall I esteem this communication, if it lays the foundation, in ever so slight a degree, for a correction of these imperfections, I will not say abuses, which exist in most, if not all, of the schools of medicine in this metropolis.

A LETTER FROM HAMBURGH.

VIRO DOCTISSIMO,

EDVARDO HUTT BROWNE,
Medicinam in Mancunio practicantem, S.D.
ADOLPHUS ROSENBLATT, Ph. D.

SEX menses abierunt à quo tempore amœnas inter latebras Blankenesæ Albem nostrum quasi speculo *τὴν σκηνὴν* reddentem mecum admiratus es. Disserentibus de omnibus rebus et quibusdam aliis tandem accidit de te coquinariâ aliquid disputare; et inter nos conventum est, fercula cujusque terræ præstantiora, si Latio donata forent, per ora virûm facilius volatura esse. Hujusce colloquii primitias tibi mitto præscriptum de placentâ Anglorum celeberrimâ Latinè redditum.

Valeas, et me, ut amas, ama.

Dabam Hamburgi,
Prid. Kal. Mart. A. H. S. 1844.

℞ Sevi è bove minutè concisi
Uvarum passarum demptis acinis
Uvarum Corinthiacarum select. aa ℥vj.
Micæ panis
Farinæ opt. . . . . aa ℥iij.
Ova tria
Nucis moschatæ unius sextam partem
Cinnamomi in pulv. subtilissimum
redacti . . . . . ℈j

Sodæ Hydrochloratis . . . . 3j.
Lactis vaccini octarium dimidium
Sacchari purif. . . . . ʒiv.
Aurantii corticis conditi
Limon. corticis conditi . . . aa ʒss.

Ovis et aromatibus inter se contritis primò lac, posteà cætera admisceas, ut fiat placenta. Tùm tenuem pannum linteum aquâ bulliente priùs madefactum in cribello setaceo sistas; deinde pannum farinâ leviter conspersum, placentâ repletum, funiculo obstrictum, in ollam XII octarios aquæ bullientis continentem immergas. A latere stet lebes aquæ bullientis, è quo olla, si quando liquor defecerit, explenda sit. Ebullitio per VI horas minimùm continuetur.

Si placenta hæc, L. B., cuivis generoso vel diviti designata fuerit, massæ, antequam in linteo obstringatur, spiritûs vini Gallici quantum solido ematur, addere licebit.

AN EXPERIMENTAL FAST.

The *Gazette Médicale* of Feb. 24, 1844, contains a curious paper by a country physician, entitled *un carême* (a Lent.) He observes, that in Paris Lent passes away unperceived; while in the country the practitioner is often consulted by persons who want to know whether and in what degree they may fast, without injury to their health.

The writer, who appears to have fasted from religious motives, but also as a physiological experiment, kept the Lent of 1839 in the following manner. He rose on the average at 6 o'clock, and ate nothing till 12. At noon he dined, his meal consisting of eggs, fish, vegetables, and dessert, except during the last three days of Passion-week, when eggs are not eaten. At 8 or 9 in the evening he supped on cheese, sweetmeats, and stewed or dried fruit. He did not take milk at this repast, as it is only allowed in some dioceses. Nor did he eat plovers, coots, sea-ducks, or any other aquatic birds, though permitted by the church. As to quantity, he always satisfied his appetite, the fatigues of his profession not allowing him to do otherwise. On Sundays he did not fast, as it is not required. Moreover, he once broke the fast, ten days before Easter. He had passed the night at a labour, from which he had to return on foot, and had the prospect of a hard morning's work before him. A saint, he says, could not have done otherwise. Every ten days he was weighed, and tried his strength by means of a steelyard; he also made daily notes of what concerned his appetite, his digestion, the alvine and urinary evacuations, the genital functions, sleep, and his general state of comfort or discomfort, both physical and moral.

He did the same thing for a month before the commencement of Lent, and a month after its termination. His weight varied but little, being never less than 60 kilogrammes, or more than 60¾. On Easter Sunday he weighed 60½, being exactly as much as on Shrove Tuesday.

A kilogramme = 2 lb. 3 oz. 4 dr. 2·45 gr. Avoirdupois; so that 60 kilogrammes = 132 lb. 6 oz.

The variations in his strength, as measured by the machine, were greater, but did not lead to any satisfactory conclusion.

His appetite was not much influenced by Lent. It failed him now and then, but not so frequently as in the previous or in the subsequent month.

His digestion, in like manner, was about the same, the unfrequent and slight inconveniences which he noted occurring indifferently during Lent or the subsequent month; but more frequently during the previous month, on account of his dining out; for frequent dinings-out he found more difficult to bear than keeping Lent. "You will fancy," he says, "that I was constantly dining out, and be scandalized at it. As a compensation, think of my Lent. Besides, the reputation of us doctors is already fixed, and I have nothing to lose."

It is said that lenten diet is heating, *i. e.* constipating, and much more so when combined with total abstinence. This the author found to be true. From Jan. 13th to Feb. 13th, being the month which preceded Lent, only three days passed without a stool; and only two in the month which followed Easter Sunday; while there were nine during the forty-six days of Lent. This was not alarming, and he did not suffer from it; but he is aware that in many persons the constipation thus produced is much more obstinate, and consequently much more inconvenient. In his case, the influence of diet was modified by exercise in the open air, the necessary attendant upon his profession.

The contrary state, or diarrhœa, occurred twice, each time for a day, in the month which preceded Lent; once during the month after Easter; and never during Lent. On one day he had two stools, which is unusual with him; and occasionally slight colic from the use of prunes.

His sleep is generally good, but was less so during Lent. It was disturbed or broken nine times during the month preceding Lent, nine times during the month after Easter, and nineteen times in Lent; and as he had less to disturb him in Lent than the preceding month, he very reasonably supposes that the diet had some influence.

"Sleep is subject, as every one knows, to strange aberrations, particularly if a man lives continently; and I did so. It was by this that I sought to measure the aphrodi-

siac power attributed to fish. For occurrences of this kind my notes give me the number 5 during the thirty days which preceded Lent, 5 during the thirty which followed it, and 6 during the forty-six days of Lent itself. Hence I found myself in Lent rather below what I consider my normal state in this respect, though I ate a great deal both of sea and river fish. So that to judge by my personal experience, the prolific power attributed to ichthyophagous nations by Herodotus and other historians, and also by physicians, would seem very problematical."

The conclusion which he drew from the sum of his sensations was, that lenten diet, even of the best kind, is a poor thing for a man accustomed to eat meat. Fasting, *i. e.* total abstinence, is still more weakening. The latter part of his mornings (particularly after 10 o'clock, his regular breakfast hour) passed away in great discomfort, in a sort of torpor, dulness, and sleepiness, which he found it difficult to struggle with, in spite of the presence of patients. At that time, too, and, in a less degree, during the whole day, he felt himself more sensitive to cold than usual. Putting aside total abstinencc, which he seems to have observed only that year, and passing over some very few infractions, he kept Lent, he says, for seven years running.

As he supposes that his *cher confrère* at Paris has not many patients who consult him about keeping Lent, he sends him this narrative as an experiment on a particular kind of diet. He thinks that the ancients knew more on this point than we do, and that the majority of practitioners are reduced to the mere notions of cooks, about eel being heavy, and haricot beans flatulent. Others have got beyond this, and will tell you confidently of some very few aliments which have been analysed, that they are nourishing, or not nourishing, seeing that they contain such or such a proportion of azote. Yet, in spite of these analyses, the peasant and labourer, though fed upon something declared not to be substantial, can easily carry weights, which the citizen gorged with azote could not lift. "Doctors, give up your whims, or let the workers in science divide their toil; and while some penetrate into the very bowels of nature, let others take up a mode of observation more extensive, though less deep, and just inform us of the action of substances on the organs of man."

[Our readers will find Dr. Stark's dietetic experiments on his own person worth perusing.—Translator's Note.]

ON MUSK.

From St. Petersburg and Moscow there is annually exported a quantity of Russian musk, amounting on an average to 500 pounds. Perhaps one half of this quantity is destined for the London market, where, more especially, the smallest bags are in demand, whilst the remainder is distributed amongst other European markets, more especially those of Holland and Germany, where the greater part is consumed.

The Russian musk, when exported from Russia, is always genuine and unadulterated; the bags never being opened, are consequently never sewn, or closed in any artificial manner. Sometimes it is obtained so fresh, that moisture may be expressed therefrom by cutting through the fleshy side of the bag. The interior mass is frequently of a soft and pappy consistence; externally, however, the bags are perfectly dry.

Dyrssen, an eminent Russian merchant, proved to Dr. Goebel, by his books, that he annually exported, on an average, about 200 pounds of Russian musk, and he stated, that through other houses at least a similar aggregate quantity was sold; and, lastly, from Moscow, in the winter, there was sent, *via* Brody, to Vienna, and through other channels, at least 100 pounds, giving an annual total of 500 pounds of Russian musk, which was rather below than above the average quantity exported.

If we take a Chinese musk bag, with its partially bald surface and yellowish-brown hairs here and there cut off, and soften the same by digestion in warm water, we perceive pretty plainly that it has been subjected to artificial changes. The external skin is tender, and may easily be torn, as if it had been destroyed by partial decomposition; the hairs have either fallen off or been removed by force: indeed, the longer hairs clearly appear to have been cut off.

Why do not the musk bags from China arrive as perfect as those from Russia? Because the contents have been removed and the baggs refilled, as may be distinctly perceived by those hairs which surround the interior small opening which is found on the hairy side of the bag, immediately before the genital canal, being depressed; whilst in the Russian musk bags these small hairs are found standing obliquely, and protruding in and between the secretion. It is possible, although not at all probable, that the musk deer, which abound in Thibet, Butan, &c. may possess musk bags of a perfectly distinct character from the Russian, but no trustworthy reference or practical judge has ever witnessed the removal of such a bag from the living animal, or described it and its contents. That the grain musk of the Chinese musk bags which have been brought

to Europe, differs very much in its effects, as well as in its physical and chemical characters, from the pure Siberian, has been ascertained; and that it likewise acts with more energy on the living economy when administered internally. All the different chemical investigations of musk, for which we are indebted to Buchner, Wetzlar, Oberdoeffer, Thiemann, Blondeau and Guibourt, Gieger and Rieman, &c., taken together, afford very few hints in reply to those questions, which involuntarily present themselves, in reference to the two different kinds of musk, so far as regards their chemical and mercantile relations.

Taking, therefore, the most essential points of the preceding communication—

I. That the Russian musk is always sold in perfect bags, and exported in considerable quantities to China and to London.

II. That from China to Russia no direct exportation of musk takes place.

III. That the Chinese musk can only be obtained *viâ* London.

IV. That the Chinese musk bags never arrive unopened.

V. That it appears most undoubtedly that the mass has been taken out and replaced.

VI. That the external appearance of the bags proves sufficiently that they have undergone artificial treatment.

VII. That frequently the secretion apart from the bag is imported from China, leading to the inference that a sufficient number of bags cannot be obtained wherein to put the quantity increased by adulteration.

Taking all these reasons into consideration, we think the conclusion announced at the commencement cannot be avoided, viz., that the distinctly marked difference of the Chinese from the Russian musk, if not wholly, is at any rate chiefly, caused by the treatment which it undergoes in China; and therefore that Chinese musk is the natural product after it has been modified by artificial means.—*The Chemist.*

THE BEST MODE OF EXAMINING THE FORM, STRUCTURE, AND MOVEMENTS OF VIBRATILE CILIA.

Take a very small portion of the gill of the sea-mussel, and with a pair of needles detach a small piece of a single bar of it, or a small portion of two or three bars, and separate them a little distance from each other. Place the portion of the branchia so prepared in an animalcula case, or upon a slip of glass, and immerse it in some of the fluid from the shell of the animal; then cover it lightly with a piece of thin glass or with mica. The portion of gill so prepared will exhibit several rows of cilia, which, if the animals from which they have been taken be alive at the time of the removal of this portion of the gill, will be seen in active motion of a fanning or a lashing kind. We may here state, for the information of those of our readers who may not have witnessed this phenomenon, that no cause for it, no motor power, has ever been perceived. It is perfectly independent of the vascular and muscular systems. Contact with the blood is not necessary to its continuance, since it continues just as active when removed from that fluid. It is independent of muscular motion, since it endures longer than the contractility of muscle after death; also, by preventing the blood from flowing to a limb, the muscles become paralyzed; the ciliary movement, on the contrary, as before stated, is unaffected by this withdrawal of the blood. Shocks of electricity passed through the ciliated parts, and the application to them of prussic acid, opium, strychnia, and belladonna, which all powerfully affect the nervous system, produce none upon the ciliary movement—the only thing necessary for the continuance of this movement being the integrity of the epithelial cells, to which the cilia are invariably attached in man and the higher animals. The best time for observing the character of the motion, and the form and structure of the cilia, is some hours after the bar has been prepared, as above directed, and when the movement has become sluggish. — *London Physiological Journal.*

TARTAR EMETIC IN TARDY LABOUR.

Dr. Gilbert, of Gettysburg, says we are frequently called to cases in which labour has commenced, but the progress is slow, both on account of the insufficiency of the uterine contractions and rigidity of the os tincæ. These cases are most frequently found to occur in patients of tense fibre, and rather robust constitutions. Bleeding produces some relaxation, but rarely hastens the labour; since, in most instances, it does not add anything to the vigour of the pains. Several years ago, while in attendance upon such a case, wishing to expedite the labour, I felt a very strong desire to administer the *secale cornutum*, but was prevented by reflecting upon the well-ascertained effects of that powerful agent under such circumstances. The question whether some other article of the *materia medica* might not be advantageously exhibited, then presented itselfto me. Relaxation of the *os uteri*, and expulsive contractions, were the principal desiderata. Emesis in the commencement is always looked upon as a symptom of labour; *ergot* also produces nausea, and

frequently vomiting. In evacuating the stomach, the diaphragm, abdominal muscles, &c. are called in violent action: these same muscles aid the uterus in its expulsive efforts; hence emesis may be looked upon as a powerful means of exciting labour and producing efficient expulsive contractions of the uterus, because the same set of associated organs are in action; and such is the sympathy between the stomach and uterus, that contractile efforts are easily transferred from the former to the latter, the more especially since the uterus is about to take on such action of its own accord. Again, while emesis excites, and is accomplished in part by the associated contractions of the muscles constituting the abdominal parietes, it also produces relaxation of the other parts of the system, and of none more certainly than the os uteri, under these particular circumstances. Reasoning thus, I was induced to make a trial of tartrate of antimony and potass, in doses of half a grain the first portion, and then a quarter of a grain every fifteen minutes, until emesis; as soon as retching commenced, the uterine contractions strengthened, and the labour terminated speedily. I have frequently used the tartar emetic since, and always with the most satisfactory results.

I was not then aware that this remedy had been used by Ramsbotham, who, speaking of rigidity of the os uteri, says that "antimony, in doses sufficient to keep up a feeling of nausea, has been exhibited in these cases with marked effect."—*New York Journal of Medicine.*

CURE OF SCIRRHUS BY IODINE.

By Dr. Friek, of Goldapp.

Dr. Friek, being consulted in a case of schirrus of the breast, successfully combated this disease by the employment of iodide of potassium externally in the form of ointment, and internally according to the following formula:—

℞	grammes.
Hydrolate of melissa.	60
Iodide of potassium.	4
Compound elixir of oranges. . .	15

Mix and dissolve.

For a mixture, of which a tea-spoonful is administered morning and evening, at the commencement, in a cup of gum and water, suitably sweetened.

The dose should be gradually increased, according to the effects.

The author affirms, that, under the influence of this treatment, maintained for 26 weeks, the scirrhus was radically cured.—*Chemist.*

ROYAL GENERAL DISPENSARY.

On Wednesday, the 13th inst., Dr. James B. Thompson was elected to the office of physician to this institution.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, March 7, 1844.

J. W. Pearce, Peterborough.—J. B. Moxon, Hull.—D. M'Cosh, Lincolnshire.—F. Hetley.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, March 2, 1844.

Dropsy, Cancer, and other Diseases of Uncertain Seat	96
Diseases of the Brain, Nerves, and Senses	152
Diseases of the Lungs and other Organs of Respiration	366
Diseases of the Heart and Blood-vessels	38
Diseases of the Stomach, Liver, and other Organs of Digestion	57
Diseases of the Kidneys, &c.	8
Childbed	5
Paramenia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	0
Arthritis	0
Rheumatism	4
Diseases of Joints, &c.	6
Carbuncle	1
Phlegmon	0
Ulcer	0
Fistula	1
Diseases of Skin, &c.	0
Old Age or Natural Decay	86
Deaths by Violence, Privation, or Intemperance	20
Small Pox	17
Measles	29
Scarlatina	39
Hooping Cough	52
Croup	10
Thrush	0
Diarrhœa	10
Dysentery	3
Cholera	0
Influenza	6
Ague	0
Remittent Fever	0
Typhus	41
Erysipelas	7
Syphilis	0
Hydrophobia	1
Causes not specified	0
Deaths from all Causes	1055

NOTICE.

Dr. J. D. Heaton's paper has been received, and we shall be glad to be favoured with the other cases to which he alludes.

Erratum.—In Mr. Walne's fourth case of removal of dropsical ovaria, p. 725, col. 2, line 21, for "its bulk, nearly that of a full-grown fœtus," read, "its bulk, nearly that of the head of a full-grown fœtus."

Wilson & Ogilvy, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

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WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, MARCH 22, 1844.

ON IRRITATION,

AND

IRRITATIVE OR SURGICAL FEVER.

By R. A. Stafford, F.R.C.S.

Surgeon Extraordinary to H.R.H. the Duke of Cambridge; Senior Surgeon to the St. Marylebone Infirmary, &c. &c.

The art of healing external wounds and injuries is termed surgery; whilst the treatment of internal diseases is denominated physic. But, although there is an artificial distinction made between them, for the sake of dividing the offices of the physician and surgeon from one another, yet from the symptoms which occur in both they may be considered almost indivisible. For instance, when an injury is received, such as a wound of any of the soft parts, a fracture of a limb, or the introduction of a morbid poison into the system, we see pain and fever arise, a quick pulse, furred and dry tongue, restlessness, want of sleep, delirium, syncope, death. The same is seen in internal disease. An individual shall get inflammation of the lungs, of the bowels, or any internal part, quick pulse, fever, restlessness, want of sleep, delirium, faintness, and death will supervene. It may be observed, therefore, the same symptoms occur in both: consequently the division is merely artificial. It is the duty, however, of the surgeon to treat local disease; and therefore I shall confine myself to that subject.

Before I describe any specific disease, I must first offer some explanation of the meaning of the word Irritation.

Irritation may be produced in two ways; general, as we see in typhus fever, &c.; and local, such as that produced from the formation of an abscess, an operation, or fracture of a limb. When irritation is general, as in typhus fever, &c. we can discover no apparent cause for it; there is nothing to be seen, and all we know is, the symptoms attendant upon it, and that the individual has fever. But when irritation of the system is caused by a wound, abscess, fracture, or operation, we see the reason of it; one of these causes have produced it; the symptoms are the same, and the same effect therefore is produced.

There are two descriptions of local irritation; the one, that which affects the whole frame; the other where only a part is affected by it. That which affects the whole frame is caused from accidents, the sudden formation of matter, or from chronic disease. An individual meets with an accident; concussion of the brain, a general shock of the body, a compound fracture, or a compound dislocation. What is the consequence? Why, first there is a general state of collapse and depression, but as the nervous energy recovers, and the circulation increases—that is to say, reaction takes place—fever comes on, the pulse is quickened, there is thirst, hot and dry skin, delirium, and other concomitant symptoms. Mr. Abernethy called this "surgical fever," and I do not think any one can offer a better definition. It is "surgical fever," that is, a fever brought on from an accident, formation of pus, or a disease of a joint, &c. A good illustration of this is seen in urinary abscess. A patient having a stricture gets urinary abscess. It is not at first discovered. He has fever, which runs on into a typhoid character. He is treated for typhus fever. He has all the symptoms; heat of skin, quick pulse, dry and black tongue, like a file, an oppressed and anxious countenance, extreme emaciation, delirium, and an exhaustion threatening death. It is discovered there is an urinary abscess; it is opened; putrid urine, pus, and sloughs are let out: the symptoms gradually vanish, and the patient recovers. I have seen such cases as these, and therefore it behoves the physician as well as the surgeon to find out, when there is fever, whether

there is local disease producing it. I remember a case in St. Bartholomew's, when I was house-surgeon there, that was admitted into the hospital as typhus fever, the patient being sent in for such disease. He was treated accordingly, and nothing was suspected of there being any thing wrong about the urinary organs. The sister of the ward, however, observed that the man did not make water, and came to me, as it was her duty to do, to inform me of it. On seeing him I found him in the following state. He had an excessively quick pulse, black and dry tongue, an oppressed countenance, and was delirious. On examining the pelvic region, and that of the urinary organs, I found in the perineum an immense urinary abscess, which was producing all these symptoms. It was opened, and a vast collection of putrid sloughs, and pus and urine, let out. The typhoid symptoms gradually abated, and the man ultimately recovered.

I could relate several instances of local irritation producing the same symptoms as typhus fever. A medical gentleman, of great practice in the suburbs of London, was seized with irritative fever, which ran on until it assumed a typhoid character. Every body considered he had typhus fever; but he had a great friendship for Sir Astley Cooper, and it was wished by his friends he might see him. Sir Astley, with his usual kindness, visited him. Immediately on entering the room and looking at him, he said to his attendant, "Pray, sir, where is the abscess?" The answer was, "There is no abscess, Sir Astley."—"I am sure, sir, there is; let me examine him all over the body." He did so, and found a vast collection of matter in his side, which, strange to say, had given the patient no pain. It was let out, the fever subsided, and he got well. I remember a case of the kind myself. A surgeon, a friend of mine, belonging to a public institution, while opening a body pricked his finger. On the same evening inflammation and swelling took place in the wound. The absorbents inflamed, and he had irritative fever. Pus formed in various points of the arm, and matter was let out; an abscess formed in the axilla, which was opened. Still the irritative fever continued, and from the oppression, the exhaustion, and the death-like feeling, more was suspected. He had some pain in his right side; a fulness and tension in some parts was observed, with a deep redness of the skin, but no fluctuation could be discovered. The symptoms were so distressing, threatening dissolution, that it was agreed upon in a large consultation of surgeons to make an incision in the part. This was done, and although no pus escaped at the time, great relief was obtained. In a day or two matter escaped from the wound in profuse quantities, and the patient taking tonics, such as quinine, &c. and generous diet, soon got well.

And now I shall speak more particularly of sympathetic or irritative fever, arising from accidents; or rather, as Mr. Abernethy called it, "surgical fever." When an individual meets with an accident he has to encounter two effects; the first shock, and the after consequences. The first shock always causes a collapse, and sometimes it is so great that reaction never takes place; death ensues. In collapse the pulse is hardly perceptible, there is a marble coldness over the whole frame, and exhaustion resembling death. The case of Mr. Huskisson was one of this kind, who, being a nervous man, got his thigh crushed by a train on the first opening of the Liverpool and Manchester railroad. The shock was so great, that reaction never took place: nature took the alarm; she was aware she could not repair the injury; the nervous system was quite overwhelmed and exhausted; he sunk and died. Such cases are not very uncommon, but I have mentioned this because we all know the fact, and it was felt and deplored by all. I shall not relate any more cases, because, as you attend to the hospital practice, you will see them every day.

The second consequence of an accident is irritative, sympathetic, or surgical fever. The stage of collapse has passed, the pulse begins to rise; there is restlessness, heat of skin, thirst, fever, &c. These symptoms all increase, delirium comes on, and typhoid symptoms. But I will relate a case; and I cannot do better than, by following Mr. Abernethy's example, give an instance of compound fracture. An individual in full health has the misfortune to be thrown from his horse, to fall from a scaffold, to be driven over, or to meet in some other way with a compound fracture of a limb; the arm, the thigh, or the leg. He at first has the stage of collapse as I have described; he is almost pulseless, cold, and exhausted. He gradually recovers from this state, the pulse becomes stronger, and he runs on into a state of fever. The whole nervous and sanguiferous system is deranged. The pulse increases in strength and fulness; there is heat of skin, fever, furred tongue, high coloured and scanty urine. He may dose, but sleep has left him; he starts and is agitated when roused. His appetite is gone, he is restless; his bowels are inactive, and the very foundation of nature is shaken. He may feel strong in his own imagination, but it is over nervous excitement: his strength is a proof of his weakness.

This state of things goes on for a few days, three or four or so, when either a

favourable change takes place, or a fatal termination of the case is threatened. When favourable symptoms occur, the wound suppurates kindly; the pus is of a healthy character, and the pain begins to subside. The fever gradually diminishes, the frequency and strength of the pulse becomes less; the secretions alter their character, and are more healthy. The distress and anxiety of countenance diminish, and the nervous excitement and circulation is more tranquil: indeed, all the alarming symptoms disappear. When, however, the case puts on a more alarming aspect, the fever continues, and runs on into a typhoid character, the wound alters, it becomes dry, and of a brown or tawny hue; there is little or no secretion from it. The extremities of the bones, if they can be seen, also become dry; the whole presenting a most unhealthy character, disposed to mortification, with a most disagreeable odour. The pulse at this time is very rapid and irritable. The countenance flushed with hectic, and round the wound there is frequently an erysipelatous blush. There may, or may not, be delirium; but most frequently the patient more or less wanders. The symptoms in the last stage assume a typhoid character; the tongue is dry and black, rough to the touch; the pulse quick, small, and irritable; the patient has constant delirium, and rambles, generally on subjects connected with his earthly occupation. Perhaps he talks to his horses, if a carter or a coachman; if a schoolmaster, of his scholars; if a farmer of his stock, and so on, as the occupation may be; but all wildly and incoherently.

The subject of the delirium is uncertain, and more often is of a melancholy kind; but sometimes it is gay and lively, and the patient appears quite happy. At the last close of the case he picks the bed clothes, and appears as if he is catching flies, or that he sees something which he wishes to pick up. Death is now near at hand: after these symptoms there is but little hope of recovery. Shakspeare has beautifully illustrated the last stage of disease, when he makes Dame Quickly say, at the death of Falstaff, in the play of Henry V.—"A' made a finer end, and went away as it had been any christom child; 'a parted even just between twelve and one; e'en at turning of the tide; for after I saw him fumble with the sheets, and play with flowers, and smile upon his fingers' ends, I knew there was but one way; for his nose was as sharp as a pen, and 'a babbled of green fields. How now, Sir John, quoth I? What, man! be of good cheer. So 'a cried out God, God, God! three or four times. Now I, to comfort him, bid him 'a should not think of God. I hope there was no need to trouble himself with any such thoughts yet. So 'a bade me lay more clothes on his feet. I put my hand into the bed, and felt them, and they were as cold as any stone, and then I felt his knees, and so upward and upward, and all was as cold as any stone!"

In death caused from local irritation, the brain no doubt suffers some alteration of structure. There is serous apoplexy, that is to say, serum in the ventricles producing pressure; softening generally, or in different spots, or want of supply of blood to that organ.

When vital parts are wounded the constitutional disturbance is immense. There is an excessive anxiety and distress of countenance; the circulation is hurried, the pulse being most rapid. If blood be taken—and the treatment generally demands it—it will be cupped and buffed. The pulse is not always stronger than in health; it frequently is smaller, but hard, and rises when blood is taken. A gun-shot wound of a vital part is a good illustration of the state of the circulating and nervous system. In gun-shot wounds the bullet may traverse through more than one vital organ; it may pass through the lungs, the liver, or the intestines. When such is the case, the constitutional derangement is very great; there is distress and anxiety of countenance, and excessive pain at the part wounded; quick irritable pulse; fever; exhaustion; convulsions, and usually death. In strangulated hernia the same is seen. Here a portion of intestine is incarcerated, a vital part; inflammation of the peritoneum takes place; extreme tenderness and pain of the abdomen; distress of countenance; constant sickness; quick, hard pulse; fever; and, unless relieved by operation, mortification and death follow.

When local injury has continued for some time, and irritative fever attends it, it then may be termed chronic: that is to say, the first stage is passed, the violence of the fever has subsided; but still an irritative and continued fever is kept up from the local injury. This is instanced by a compound fracture. When reaction has taken place after the first shock, the fever and concomitant symptoms are very violent, but they gradually subside; they become more equalized; the fever remains, but is not so violent, and as the patient recovers, and union of the bone takes place, it abates and goes altogether. If, however, the case is likely to terminate unfavourably, the fever then runs on into hectic, and the worst symptoms occur. A lumbar abscess is a good example of irritative fever. Here we see irritative fever arising from the formation of pus; the skin is hot and dry; the pulse extremely rapid; thirst, furred tongue, and distress of countenance, &c. At length an abscess points in the groin, the thigh, or elsewhere. It is let out, the violence of the fever subsides; but it runs on into a chronic form, as long as a

secretion of pus takes place, and if the disease of the vertebræ be great, and does not amend, hectic fever supervenes.

Hectic fever may be considered the third stage of surgical fever. It occurs when disease has continued for a considerable time, and generally when the case becomes hopeless. I do not mean, however, to say that no case recovers after hectic has appeared; I have seen several cases, after this symptom has been present, get well. Hectic has its paroxysms, and generally comes on in the evening, the fever being less during the day. It is attended by a flushed countenance; quick pulse; heat of skin; thirst; and the face, from the beautiful red blush and bright eye, may be said to look brilliant: but it is the brilliancy usually preceding death. After this stage of fever is over, profuse nocturnal sweats come on, and in the day there is a diminishment of febrile action. We see hectic fever arise in long-continued disease, such as of the hip-joint, the knee, and the vertebræ, in chronic abscess, where there has been a profuse discharge of pus, disease of the bones, scrofulous diseases, accidents of long duration, and wounds where a vital part is injured, consumption, and other internal injuries.

But there are varieties of irritative fever. For instance, if an individual meets with an accident, it is not uncommon for it to stir up some old disease he has been subject to. Erysipelas perhaps, the gout, or ague. In wounds it is very common for erysipelas to ensue, and more particularly if that disease is constitutional. Hence, if a patient has been liable to it, and should meet with an accident, get a wound, or undergo an operation, he is disposed to an attack of this disease. I have known several instances where amputations have been performed upon persons who have been subject to this disease, and erysipelas has appeared on the stump. A case of this description occurred in my practice a few months back. I amputated the thigh of a woman who was subject to this disease. In a few days after the operation it made its appearance on the stump. The same in amputation of the breast. A female whose breast I removed for cancer was likewise liable to erysipelas. An attack of this disease made its appearance round the wound, and it was with difficulty the patient got through it.

In injuries of the head, when the scalp is wounded, erysipelas very often supervenes, and I have observed it more often occur in those who have been the subjects of it before. I have seen several cases of this description. and even lives lost in consequence. The late eminent surgeon, Mr. Vance, was *one* instance of it. He was thrown down stairs by a madman, and the scalp was wounded. Erysipelas came on, and he died. I remember several other such cases; so that I would not even apply leeches on the head of a person who was subject to this complaint. I have known erysipelas come on from the application of leeches on the temples, to so great a degree as to endanger the life of the individual. It is of consequence, therefore, before you take blood in this way, to inquire whether the patient has ever had this disease before. Gout, I have said, might arise from an injury. I have seen such cases. I remember where a heavy piece of wood fell upon the foot of a man subject to gout. Leeches, evaporating lotions, fomentations, and other remedies, internal as well as external, were employed, but the inflammation did not abate. He at last mentioned he had been subject to gout, and suspected from his feelings that he had an attack of it. The hint was taken; he took colchicum, and other remedies for it, and the inflammation soon disappeared. During my practice I have seen three or four cases where gout has shown itself in the injured part, when the individual has been subject to the disease.

Ague very commonly occurs from local injury when the patient has previously had an attack of it. An injury of the urethra is a good example of this It very often appears, if the canal is injured, that rigor soon after comes on, exactly like the shivering fit in ague; it is followed by the hot stage, and afterwards the sweating stage. It would be difficult to tell the difference, was not the cause known: I have seen the irritative fever attendant on accidents run on into intermittent fever. The following case I well remember. A gentleman of distinction was riding in frosty weather in Regent Street, and the ground was very slippery: his horse slipped up, and fell upon his side, with the gentleman's foot under him. As soon as the horse got up he was taken into a shop, and I was sent for. I soon saw something was very wrong about the foot, and therefore cut the boot off. I found that the tarsal bones were dislocated from one another; an accident of very rare occurrence—so rare that its possibility is doubted; but Baron Dupuytren, Lisfranc, and other French surgeons, under whom I studied for a certain period, describe this dislocation. A surgeon of very great eminence, and myself, reduced it, and the patient was taken home. Splints made of pasteboard soaked in hot water, and adapted to the foot, were applied. The pain, however, was most excruciating. Leeches, evaporating lotions, fomentations, &c. were frequently employed, but the pain continued for more than a fortnight, and at length took an intermittent form, coming on every evening about eight o'clock, lasting five or six hours, and then gradually abating, and the foot being easy during the day. The means of reducing inflammation were continued, but with no effect. The symptoms

were so peculiar, that we suspected it to be a case which put on an intermittent character. Quinine, therefore, was prescribed. The patient got better and better until he got well.

Tetanus often follows local injury; it is then called traumatic tetanus: that is to say, from a wound. It is not uncommon for this disease to follow an injury, and more particularly of the tendons. A slight cause will very often produce irritation sufficient to bring on tetanus. A man had a compound fracture of the ring finger of the right hand, and in eight or ten days he had trismus, and was admitted into St. Bartholomew's Hospital. The finger was removed, but the tetanic symptoms remained. No treatment succeeded, and he died. If tetanus has once taken place, the removal of a limb or part which gave origin to it does not afford the slightest relief. The disease being secondary is established, and cannot be overcome by any previous cause being removed. Some years ago a woman in the St. Marylebone Infirmary had a chilblain of the great toe which went on until it sloughed. Tetanus supervened. The removal of the toe was not of the slightest service: she died. I have seen many cases of tetanus, however, that have recovered. But I shall say more of this disease at some future period.

I have been speaking of local irritation producing general constitutional disturbance. I shall now speak of it where it is merely *local*. Irritation of a part is only when one organ is affected; the bladder, the rectum, the urethra, &c. without fever. An irritable bladder is a very common affection; an individual has constantly a desire to make water, but the pulse is not affected by it, or the general nervous system. There is no fever, hot or dry skin, or thirst attendant upon it. The circulation is carried on as quietly and tranquilly as if there had been no local irritation. We see the same in some ulcers, there is heat and pain; also in diseases of the skin, there being great irritation and itching, in glands where abscesses form, and many other parts, but there is no constitutional disturbance.

When there is irritation of one organ it is very common for another to sympathize with it; that is to say, there may be disease of one joint; the next to it will suffer pain, although there is nothing the matter with it; for instance, in a disease of the hip the knee sympathizes with it, and there is great pain in the latter joint; so, in disease of the knee-joint, the ankle is painful. In arthritic rheumatism this is peculiarly well exemplified; the disease goes from one joint to another in a most remarkable manner, and there is nothing for certain to account for it. Again, when there is stone in the bladder, there is pain at the end of the penis, disease of the prostate gland, pain in one or both thighs. A blow on the head causing concussion of the brain will cause vomiting; a blow on the stomach, death; a sudden cessation of a discharge from the urethra, hernia humoralis; in fact, the instances of sympathetic irritation are too numerous too mention. They are to be accounted for through the nervous system. The nerves of the limbs are connected with the medulla spinalis, and through it with the brain, and thus any injury to the limbs will account for irritation of the whole system. Likewise any injury to an internal part will, through the sympathetic nerve, account for the same. But they both sympathize with one another, and therefore, whereever the injury may be, the whole nervous system will be deranged.

But local irritation is not always to be explained through the nervous system. In many instances local irritation takes place through the absorbents. For instance, an individual has ulcer on the foot, a hang-nail, as it is called, or an irritable sore on the leg. The absorbents inflame, and the inguinal glands become enlarged, and in some instances even pus forms. I have seen several cases of this description; indeed, it is not uncommon for a patient to present himself at an hospital with enlarged inguinal glands, not knowing the cause. On inquiry I have very frequently found an irritable ulcer on the foot, a hang-nail, or ulcer of the leg, and there has been a red line denoting inflammation of the absorbents. Many exemplifications could be adduced. The wound received in dissection is a good instance. A gentleman opens a body, or dissects. He pricks his finger; pain at the spot supervenes, the absorbents inflame, and the glands in the axilla become enlarged. Pus forms at various spots along the absorbents or in the glands, and is followed by the concomitant symptoms. Again, an individual gets a chancre. Through the absorbents the glands of the groin inflame and are enlarged, and bubo is the consequence. Numerous other instances of this kind could be brought forward, but it is unnecessary to recount them, as they will frequently be met with in practice.

The *treatment* of irritative fever depends upon the cause which gave rise to it. If from an accident, such as a compound fracture, concussion of the brain, a compound dislocation, &c. our object must be to reduce inflammatory action and fever. This can be done in three ways. By purging, bleeding, and opening the skin. In all cases of irritative fever, purging freely is of great importance. It tends to reduce febrile and inflammatory action more than any other means; indeed, unless the bowels are well opened, other remedies will not have their proper effect. A dose of calomel, followed up

by a compound senna draught every six hours, is the best method of clearing out the bowels, or castor oil. This being done, sudorifics may be administered, such as antimony, nitre, &c. and saline medicines given in doses according as the case demands. The fever may run very high, and bleeding may be required. This is a question of great moment, and ought not to be done rashly. We will suppose such is the case in a compound fracture, or compound dislocation. We find the pulse is immoderately quick, full, and strong. The skin hot and burning, and the tongue furred, and approaching to dryness. There can be but little doubt the patient ought to be bled; but before we do it, let us reflect. Let us remember, that although the symptoms demand depletion, yet that nature has much to repair. There is a compound fracture, a wound connected with a broken bone shivered in one or more places. To restore such injury great strength of constitution will be required. We ought, therefore, to bleed moderately, to reduce the over action of the sanguiferous system, but not to depress it. In injuries of the head more bleeding will be required; a vital organ has received a shock, and inflammation must be reduced. In chronic irritative fever, when the violent symptoms have abated, the skin should be kept moderately open, and the secretions attended to. Should the liver not perform its functions properly, small doses of mercury may be given, such as Pil. Hydrarg. Pulv. Hydr. c. Cretâ, and even small doses of calomel, such as that in the combination of Pil. Hydr. Sub. c. or Plummer's pill. These should be followed by a mild aperient the next morning, such as will act gently and without violence. If the strength is very much impaired, tonics, such as quinine, &c may be taken, and nourishment, but it must depend upon the constitution of the patient, and the judgment of the medical attendant. The treatment of many individual cases of local irritation and irritative fever might be spoken of, but they are embraced in the particular classes of disease to which they belong; therefore it is unnecessary for me to mention them. In hectic, the third stage of irritative fever, the patient will now require support. He may take any nourishment of a mild description and easy of digestion, and quinine, bark, wine, and porter, &c. may be administered. In conclusion, as a general rule, when local irritation is produced from any particular cause, the removal of that cause will relieve it.

ON INFLAMMATION.

To the Editor of the Medical Gazette.

SIR,

THE appearance of the Encyclopædias of Practical Medicine and Surgery may be regarded as marking an era in medical literature. Contemporaneous periodicals, ever ready to praise and be civil to those who do not need it, look on approvingly, occasionally patting on the back some of the gentlemen who so complacently sign their names to their monographs, and who thus register themselves among the *patres conscripti* of medicine and surgery; so that our immediate as well as more remote successors, who would refer to them as affording evidence of the manner in which these works were received by the profession, will find no reason to doubt that they gave a fair and faithful digest of the state of medical knowledge as actually existing at the date of their publication. I would not venture on light grounds to disturb all this harmony, but I have been for many years an attentive observer and collector of facts bearing upon the grand centre of all medical science, namely, the doctrines of inflammation; I have noticed the controversies and discussions to which these facts have given rise, and I have also noticed with pain the reproaches which, on account of the unsatisfactory state of these doctrines, have from time to time been cast upon medical science. I feel, moreover, that this stigma will not easily be removed, so long as the works above alluded to are permitted to spread through the length and breadth of the land without one word of warning or caution against the fallacy of the doctrines they contain on this all important question. In the absence, therefore, of any one either more capable or more unwilling, I venture to take part of your motto to myself, and say "licet etiam mihi dignitatem artis medicæ tueri," satisfied that a complete reform in the doctrines of inflammation, and, as a necessary consequence, in those of fever also, will do more to oppose the marauding incursions of the light cavalry of quacks, than all the charters that can possibly emanate from royal authority; because the elevation of the study of diseases to its proper position

as a science will inspire public confidence.

Every one knows that the great mass of facts resulting from the accumulated researches of various and numerous individuals, and bearing upon the subject of inflammation, have been discovered since the death of Mr. Hunter. As all these inquirers undertook their investigations with the express view of examining the actual condition of the blood-vessels and tissues while in the state of inflammation, and as every inquirer is always more prone to favour the inferences drawn from his own performances, more than those either of his rivals or his predecessors, it is by no means wonderful that much discussion should have arisen, and great contrariety of opinion should prevail, on this fundamental point. If Mr. Hunter had left this point in a satisfactory condition, there would have been no occasion for any further information; but that he did not do so, the simple fact of so many individuals, unconnected with each other, having instituted their investigations, and persevered in them for years, may be taken as proof enough; indeed, it must be confessed that the labours of Mr. Hunter in this respect can scarcely be considered as worth mentioning in comparison with what has been done since his time. If, on the one hand, a comprehensive glance be cast over the very few data respecting the changes which occur in inflamed parts in Mr. Hunter's possession, and the wide reach of his doctrines, extending to every possible variety and degree of inflammation; and, on the other, over the vast store of positive facts accumulated during the last thirty years, of which little or no practical application has been made, we see, in the first instance, surprising activity with most scanty means; and, in the second, wonderful inactivity with most ample means. It is perhaps as well that men's minds should be gradually familiarized with these as yet newly discovered facts; they may possibly apply them more readily to their legitimate use when the proper time arrives; but it has for some years been a matter of profound astonishment, to me at least, that no one, out of all those who have devoted so much attention to the subject, has had sufficient penetration to perceive the bearing which these new facts have upon every branch of the doctrines of inflammation, as handed down to us from Mr. Hunter, and, as a necessary consequence, upon its treatment too. Many of these experimenters have been very sensible men, and yet the bare suspicion of the idea that so many new facts must necessarily involve new doctrines and treatment, or at any rate an entire remodification of both, never seems to have crossed the minds of any of them; but, on the contrary, as each individual has come forward in succession, after some little difficulty at starting, in torturing his experiments and inferences so as to square with the prevailing doctrines, he tails off in Mr. Hunter's track with the most edifying unanimity. Each man, therefore, has a point of agreement in common with all, viz. an unsuspecting faith in Mr. Hunter's doctrines, and also another point in which he is at variance with each separately, viz. an implicit confidence in the correctness of his own facts and inferences. The labour of all is the same, viz. that of making their opinions eventually square with those of Mr. Hunter, so as to form one *harmonious(!)* whole. The doctrines respecting the distinction between active and passive inflammation appear to have constituted the great stumbling-block over which all have fallen, one after another; but I must not go any further in this direction, as my present object is not to point out what is right, so much as to show what is wrong: no one is thankful for being told what is true, until he has been fully convinced that what he has hitherto believed is false.

In an Encyclopædia of Practical Surgery, a great deal of what is valuable and excellent respecting the best method of treating fractures, of reducing dislocations, of tying blood-vessels, &c. &c., may be laid down without any regard to the views which may be taken of the nature and pathology of inflammation; but the case is very different in an encyclopædia or dictionary of practical medicine. Here, the doctrines on this subject constitute the life and soul, and pervade almost every part; any serious error or oversight, therefore, in this particular point, is absolutely fatal to the whole work; it ceases to possess any value whatever from the moment the mistake is pointed out. It becomes like a building affected with the dry rot, which requires no rude assaults of

stormy winds for its destruction, but crumbles to pieces of itself, because its principle of cohesion has perished.

It will, perhaps, be better to begin with the examination of Dr. James Copland's views on the pathology of inflammation, as propounded in his Dictionary; not because his opinions are supported with more or less ability than those in the Encyclopædias, but because he boldly asserts his exclusive right to them, and claims great credit to himself on the score of their originality, and also because the sole responsibility rests with him.

In the article on Inflammation, after discussing the more obvious conditions of pain, redness, heat, swelling, &c. &c., incidental to that state, Dr. Copland proceeds to give an account of the causes and rationale of all these phenomena. In paragraph 150, he commences this part of the subject by saying, "The organic nervous tissue is primarily affected in the seat of inflammations of all kinds. I have already contended that inflammation, in its more *sthenic forms*, is a result of a *morbidly* excited state of the organic nervous tissue surrounding the extreme vessels or capillaries of the affected part, or a derangement from an unnaturally exalted condition of these nerves, on which the function of these vessels, and, indeed, of the whole vascular system, have been shown to depend." The correctness of this statement depends on the truth of Dr. Copland's opinions respecting the functions of the nerves. We must therefore turn to the article on Irritability. Here we find him saying, "that the organic or ganglial nervous system presides over the strictly vital functions, and that all the grades and manifestations of irritability or contractility proceed from this source." By this Dr. Copland means, that the power of contracting possessed by all voluntary muscles is not derived from the cerebro-spinal, but "from the organic or ganglial system of nerves—that this latter system bestows on muscular or fibrous tissues the power of contraction, whilst the spinal nerves simply conduct or convey the stimuli to contraction." I must beg particular attention to this point, because these inferences form the key of Dr. Copland's whole position. He examines certain animals whose nervous systems are either chiefly or altogether ganglionic, and finds that in them these nerves are distributed to every part of the body, and then he concludes that the same arrangement exists in man, and in the higher orders of warm-blooded animals. Are we, then, like polypes, to whom being cut in half is not a matter of much importance? Surely, in order to maintain something like an appearance of probability, Dr. Copland ought to be able to show that warm-blooded animals can live at least as long as frogs after the removal of their brains. When we observe a broad distinction between the arrangement of the nervous systems in the two classes of warm and cold-blooded animals, and an equally well-marked difference respecting their tenacity of life on the receipt of injuries, there ought not to be any difficulty in arriving at the true explanation of the phenomena presented by each. There would, indeed, be some real ground for perplexity if the facts were reversed: but what is the fact? What does anatomy say on this point? All modern anatomists (without any exception, I believe) notice the distribution of ganglial nerves, together with the blood-vessels, to all the thoracic and abdominal viscera, and, in short, to all parts concerned in maintaining what is understood by the term organic life; but nothing is said respecting the existence of ganglial nerves in that large division of the body consisting chiefly of the simply voluntary muscles. It is scarcely possible to conceive that minute dissection can be carried further than it has been: the cerebro-spinal nerves have been traced to their ultimate distribution, in the form of loops, in the voluntary muscles; but no mention is made of any ganglial nerves in these parts, or as to their accompanying the arteries which supply them. So much for the fact. Let us now ascertain whether analogy is at all in Dr. Copland's favour, since he may argue that ganglial nerves may possibly accompany the brachial artery through its whole course without being visible. Now there is no fact better established than this; viz. that the ganglia belonging to the sympathetic are never at any great distance from the parts supplied by them. This is so constantly and invariably the case, that when it becomes necessary to detach a few filaments, as it were, to an out-post, a ganglion is always found; thus, we

never fail to find the spheno-palatine, the lenticular, and the otic ganglia, in their proper places. These examples are not numerous, but they are most significant, as leading to the inference, that, if the ganglial nerves were distributed to the limbs and general frame of the body, the ganglia themselves would be found there also; and that, not so small as to be discovered with difficulty, but so large that there could be no mistake as to their nature; for, be it remembered, there is no difficulty in finding them in those animals whose nerves are entirely ganglionic.

Much more might be urged most effectively on this point; but I feel constrained to be as brief as possible, and I think enough has been advanced to prove that Dr. Copland has drawn, and relied upon, a false inference; that, being unsupported by fact, and contradicted by analogy, he has no ground whatever for concluding that ganglial nerves exist in parts where they cannot be demonstrated by the most minute dissection. The key-stone of his position being thus not merely loosened, but completely removed, the whole superstructure necessarily falls to the ground.

"Celsæ graviore casu
Decidunt turres."

Dr. Copland is by no means singular in this mistake, of supposing the ganglial nerves to be distributed to every part of the bodies of warm-blooded animals; Dr. Wilson Philip, among others has fallen into the same error; but I believe that all who have adopted this opinion are *physicians;* that is to say, men who cannot be received as authorities on an *anatomical* question.

I may, perhaps, be excused for noticing in this place a most reprehensible and pernicious method of induction, which has obtained of late years, more particularly among those who are fond of making experiments, and of drawing their illustrations from comparative anatomy. These gentlemen employ themselves in ascertaining in what class of animals any given system or organ exists in the most simple or rudimentary state, and in tracing its gradations successively through the lower classes up to the highest; and having done this they allow themselves to reason in the same direction; that is, from below upwards. They examine thus, for example, all the varieties of the sanguiferous system, and because they find the circulation carried on in some without the aid of a heart, they infer that it is maintained chiefly by means of the capillaries in those where the mechanism of this organ is presented to us in its most perfect form, and consequently that their powerful muscular apparatus is only of inferior or secondary importance; and yet there is no fact more clearly established than this, viz. that the force exerted by the heart is capable of overcoming, and does actually overcome, at every stroke, the resistance occasioned by the elastic pressure of the whole arterial system. We see this most fallacious method of induction gravely adopted by physicians who are well acquainted with the dreadful distress, in fact the painful struggle for existence, which is attendant upon any disease of the heart, which impairs the efficiency of its action. It appears to me, that the only true inference to be drawn from a general glance at the various modes by which a circulation is accomplished in different classes of animals, is this; that a circulation is necessary to all, and that this common object is attained by a *variety of means*, some of which we can understand, but others are beyond our comprehension. It has become the fashion to argue from what is not known in direct contradiction to what is well established, and I suppose it will continue so for a time, although it is not possible for arguments so derived to lead anything but error. It is unnecessary on this occasion to point out what errors spring out of the original one, with regard to the universal distribution of the ganglial nerves, or to trace the mode in which it extends its baneful influence like a subtile poison throughout the doctrines contained in the Dictionary of Practical Medicine: I will, therefore, conclude for the present and remain,

Your obedient servant,
J. W. Earle.

Cheltenham, March 6, 1844.

THE BATH WATERS.

To the Editor of the Medical Gazette.

Sir,

A few months since you inserted in your journal a statement from Sir

Alexander Crichton, in commendation of the thermal waters of Bath, from the use of which that justly esteemed and veteran physician had derived great and manifest benefit, on two different occasions, whilst labouring under disease.

Communications such as that (and from such a quarter), purely practical, and irrespective of any theory, tend more to the advancement of the healing art than any of your finely spun chemico-medical, or medico-physiological, or even electro-chemico-mechanical speculations, into which our profession seems about to fall, after a long season of purely empirical practice.

When a physician grown grey in the exercise of his profession, himself a sufferer, tries, either from a spontaneous conviction of the propriety of such experiments, or at the instigation of those who are best conversant with them, the effect of thermal springs in his own case; and, in due season, tells his brethren that, through those means, and those only, his health was restored at two distinct times, after every other method of treatment had failed, we derive great encouragement from his example: we feel no hesitation in recommending it to be followed by other patients placed under similar circumstances, and we enhance the value of the means employed by publishing the successful results.

These considerations have induced me to request your insertion of the following brief narrative of as effectual a cure, produced by the Bath waters on myself, as that related by Sir Alexander. Thus will the public learn, through your channel, that, in recommending to others, in the earnest manner I have done, in the second volume of the Spas of England, the unjustly neglected volcanic springs of Bath in certain complaints, I so far yielded to the dictates of my own conscientious belief in the virtues I practically knew them to possess, that when the necessity for trying their effect on myself unfortunately did occur, I hesitated not a moment in doing so, fully impressed with the notion that no other means were likely to restore my health so quickly.

The treatment of chronic, and, in many cases, of recent disease also, by mineral waters, seems to be so directly prompted by the bounteous dispensation of the Creator, who has laid those wonderfully constituted agents, in more or less profusion, within the reach of every nation, that, during the repeated and successful endeavours I have made, in the course of many years' experience, to recal public attention, in this country, to the importance, and superior as well as pleasanter nature, of that treatment, I considered myself to have been the humble instrument of His providence. Most assuredly His benevolent views, in vouchsafing such a blessing (for I cannot look upon mineral springs in any other light), will never be thwarted by the malice and scoffing of plagiarist writers or interested critics, who, under the garb of pretended eulogiums, struggle to put down, by sneers and doubts, the reviving popularity of mineral waters.

I am, sir,

Your obedient servant,

A. B. Granville,
M.D. F.R.S.

109, Piccadilly, March 6th, 1844.

Narrative.—On the 5th of October last, being then in my usually good state of health, as I was returning to town, from a long walk into the country, I found, at the end of my path, a narrow and shallow ditch, across which I leaped. Unfortunately I took my jump with closed knees, and alighted on the opposite side on both my heels at the same instant, with the body nearly erect. The result was a sudden and most distressing jerk, which shook my whole frame, from the loins up to the back of my head, and, for a moment, made it doubtful whether I should be able to proceed farther.

After staggering for a few seconds, and pressing my hand on the left side of my chest, where I likewise experienced some uneasiness, I felt equal to walk again, though not with the same freedom and elasticity as before. There were no public conveyances at hand; and I had to make my way back to town, the distance of six miles, the best way I could.

Not to enter into particulars which do not directly bear on the single point of my present communication, I shall merely observe that, from the day of the accident until a few days after my arrival at Bath, in the second week of December, a period of ten weeks, I never could change from the horizontal to the erect posture, or attempt a few steps across the floor,

without experiencing the most distressing symptoms; unaccompanied, however, by any pain whatever, as long as I remained perfectly quiet in a recumbent or semi-recumbent posture, or even sitting. Not the slightest indication of disturbed health was perceivable.

The distressing symptoms I allude to were, first, a feeling in the right inguinal region and hip as if the limb were severed from the body, or did not belong to it; next to which came a sense of constriction at the precordia; to which, if I persisted in my progression forward, succeeded great anxiety, a flushing of the face, and a sense of fulness at the back of the head, when I found it absolutely necessary to stop, and immediately to lie down. On two or three occasions I thought I experienced some giddiness also; but this might have been only apprehension, as I admit I felt very nervous at the obstinacy with which the same disabling effects invariably followed every attempt at walking, except in walking up and down stairs, when no disagreeable effect ever occurred.

These symptoms did not seem to depend on any real injury done to the spine, or to the right hip-joint, from which latter part, as I before remarked, they appeared to take their origin, extending thence upwards to the back of the head, and downwards to the front part of the right leg. This point was clearly made out by my own observations, and those of Sir Benjamin Brodie, who kindly paid me three or four visits after I had been confined to the house about five weeks, and carefully examined the parts, in which he could not detect the smallest lesion. He agreed with me and the two medical friends who had been endeavouring to find out and remedy the cause of my complaint, that it was a singular case of nervous affection, produced by concussion, and thought that some considerable time would elapse before I could again walk with impunity. He therefore recommended rest above all things; and, as my general health was not otherwise much impaired, he abstained from ordering any medicines.

The anomaly of the case consisted in this,—that although I could not walk without producing such general distressing symptoms as I have described, *beginning always in the right extremity*, the power of action, the feeling, the agility and strength, as well as the warmth, colour, and size, of the affected limb, were in their perfectly normal state; and, in fact, offered not the smallest vestige of difference between it and those of the corresponding extremity of the left side.

This state of things lasted, as I before stated, ten weeks, during which period I more than once resolved on losing blood—once (on the outset) by venesection, thrice afterwards by leeches, and as many times by cupping. For these several abstractions of blood, which were never to any great amount, but which, I feel convinced, were useful to me, I am alone responsible. I could not divest myself of the notion that some venous congestion had been the result of the concussion I had experienced during the leap I took; and some singing in my left ear, to which I had never been subject before, but which had existed since the accident, and was always relieved after bleeding, confirmed me in that notion. I ought to add, however, that I never was drowsy in the least; that I experienced no interruption in my ordinary sleep at night; and that the pupils of my eyes had never deviated from their natural state. Indeed, so far was I from being otherwise ill, that I carried on, for an hour or two every day, my usual written correspondence, and was able to attend to professional consultations in my room, provided I did not move. The low diet on which I deemed it prudent to live for several weeks, and the daily use of aperient medicines, together with the total suspension of my ordinary very active habits of life, had certainly produced great general debility, and given me the appearance of one in very bad health.

In this state, and discouraged at the only alternative of having to remain in a state of inaction for an indefinite period, I determined at once to proceed to Bath, to try the effect of those thermal springs on my limb. The result was, beyond my expectations, favourable; nor was the rapid manner in which that result was brought about less surprising. Hardly able, when I arrived in that fair City of the Waters, to walk from the railway station to the carriage, and being made ill during the

first four or five days of my *séjour* in that most excellent and well-appointed hotel, the York House, by a mere walk of eighty paces between the bed and the sitting rooms on the same floor, by the time I had taken fifteen baths, and had applied the *wet douche* to the whole length of the affected limb ten successive times, I found myself equal to walk from York House to the bottom of Wilson Street, and back again, a distance of more than a quarter of a mile, without experiencing any inconvenience whatever.

From day to day, and from the very first half-dozen baths, I became sensible that a manifest improvement was taking place in me; and subsequent experience has convinced me that to the application of their peculiar agency to my disabled nerves I am indebted for my present perfect recovery. The employment of ordinary warm baths had been previously tried every day, for some weeks, in town, to no purpose: to deny, therefore, the direct influence of the thermal springs in effecting the complete restoration of my limb and good health, would be to fly in the face of the most palpable evidence.

In conclusion, I have only to add that I have continued in perfect health ever since; and that the almost sudden transition from absolute confinement in the house during the whole of the last three months of the year, to the entire and unlimited exercise of my profession and usual active habits—in doors and out of doors—to which I have been restored by the Bath waters since the beginning of January last, would appear to me almost miraculous, were I not, from extended experience in matters of this kind, aware of a very large number of cases of recovery, equally surprising, having been effected by what I have called, in my works, "*telluric heat*," diffused through mineral waters.

URINARY DEPOSITS.

To the Editor of the Medical Gazette.

Sir,

Having perused the communication of Dr. Ward, in the last number of your valuable Gazette, and having frequently met with cases similar, in some respects at least, to the one therein related, I have forwarded the present remarks, with a view of affording some facility in the recognition of the nature of the deposit therein described, as well as of urinary deposits in general.

I am, sir,

Your obedient servant,

J. W. Griffith, M.D. F.L.S.

9, St. John's Square,
March 4, 1844.

I am sorry to find that the milky or oleaginous character of the urine, in the cited case, was not recognized by other means than the mere microscopic examination; and this for several reasons. One is, that it is an extremely difficult matter, and requires great practice, to be enabled to distinguish quantity by the microscope: hence, to those but little accustomed to such investigations, a very small quantity of a substance whose presence is ascertained is apt to receive great attention, and its importance be overrated;—another is, that a description of the mere microscopic appearance generally serves more to excite the imagination than to assist in developing the real nature of a substance. The application of a few tests, in the case alluded to, would have determined in one minute the true nature of the crystalline matter with positive certainty; and if there is any use in recording the particulars of cases, it must certainly be better to report them in a positive and satisfactory manner, than to leave them in a state of doubt and uncertainty.

The deposit described by Dr. Ward in all probability consisted of either lithic acid or lithate of soda; such, at least, I should imagine from the description; although the size of the crystals is not mentioned, nor their colour*: moreover, if they really were lithic acid, they would have been dissolved by nitric acid, which appears not to have been the case; but probably nitric acid was added to them whilst immersed in the urine; thus, by becoming diluted, its action would be that of dilute nitric acid, which does not act nearly so much upon either lithic acid or the lithate of soda as the concentrated. Both lithic acid and lithate of soda are very frequent in the urine of children affected with scarlatinal anasarca, as I have very frequently had opportunities of proving. In fact, these are the only cases in

* "The spikes, resembling splinters of glass," (and which were probably colourless) were most likely the super-lithate, for lithic acid never exists in a colourless state in the urine.

which I ever recollect having found the urate of soda in a crystalline state. They are frequently mixed with lithate of ammonia, also in a crystalline state; and the two deposits much resemble each other. The latter has been figured from one of my specimens, in a sketch accompanying the valuable lectures given by my friend Dr. G. Bird. I was at first inclined to the belief that the crystalline needles found upon the surface of the spherical centres might be distinguished by their acuteness in the lithate of soda, and their obtuseness in the lithate of ammonia; such, however, I have not found verified. In fact, when lithate of ammonia is prepared artificially, by decomposing a solution of lithate of potash or soda by muriate of ammonia, the lithate of ammonia is precipitated in a crystalline form, and retains partly the microscopical characters described by Dr. Ward. Is this the manner in which this deposit, when crystalline, is formed in the human body? The acicular crystals found on the surface of the central globules of lithate of ammonia and soda, when crystallized, have been usually considered as being composed of superlithate; this, however, I believe to be incorrect, for I have distinctly crystallized the lithate of soda (both the central spherules and radiating needles) from an alkaline solution of this salt.

In the treatment of scarlatinal anasarca, the plan I have always found most beneficial is that usually recommended by the best authors, viz. that of depletion, carefully avoiding squills, or all active diuretics, which are, doubtless, as improper in that disease as are stimulating expectorants in the bronchial affection attendant upon measles. The best treatment is occasionally venesection, (which, however, is not often requisite,) antimonials in free doses, hydragogue purgatives, warm baths, &c.

In the course of the last summer I found a very curious deposit in the urine of a female patient, about fifty years of age, under my care at the Northern Dispensary, who had suffered from severe pains in the jaws, and whose gums were extremely vascular, having arisen without any apparent cause. There was no tendency to hæmorrhage from any part of the body; the patient was debilitated from attending to her husband, who had been extremely ill; she had also prolapsus uteri, dyspepsia, &c. The only remedy I found of any service to the gums was the application of nitrate of silver in very strong solution. Leeches to the jaws, aperients, tonics, (mineral and vegetable) astringents, creasote, and a host of other remedies were unavailing, although long and steadily continued. There were no urinary symptoms, except slight irritability of the bladder. The urine was pale, slightly but distinctly acid (sp. gr. 1016), containing an increased quantity of mucus, but of the healthy kind. The deposit was white, crystalline, and opaque, like phosphate of lime to the naked eye. When examined by the microscope, it was found to consist of nuclei, which were almost colourless, and studded with minute acicular crystals all over their surfaces. It was well washed with water, and dried. It was soluble in diluted acids with copious effervescence, the solution being precipitated by oxalate of ammonia. When heated to redness, it left a white, alkaline, infusible ash: this was soluble in diluted nitric acid. The solution gave a white precipitate with oxalate of ammonia. On its solution in dilute nitric acid and evaporation, no trace of lithic acid was present, nor was phosphate of silver precipitated when solution of the nitrate was added. This deposit was thus clearly shown to consist of carbonate of lime in the crystallized state. Its examination was also made by my friend Mr. W. Francis, who arrived at exactly the same results. I found it several times in this urine, which in other respects was natural, and distinctly acid, and thus was not the result of the decomposition of urea, and consequent precipitation of the calcareous salts by the ammoniacal carbonate formed. Carbonate of lime is, I believe, never found in the urine, except under the last mentioned circumstances, and I also feel convinced that carbonate of ammonia is never found in that fluid, except as a result of decomposition, for in all the cases where it was supposed to have been *secreted* there has been a marked degenerated state of the fluids of the body, such as predisposes them to rapid decomposition; and any one who has paid much attention to the study of the urine knows well how very rapidly the urine becomes alkaline under certain circumstances.

I may remark, that some artificially

crystallized carbonate of lime, which I prepared, almost exactly resembled the nucleated part of this deposit. It may be wondered how a carbonate can exist in an acid urine undissolved? and I confess it has always puzzled me to

Effects of reagents upon urinary deposits: the characters in the first columns, combined with the microscopic appearances, will serve to distinguish one from the other, and, being readily applied, will be sufficient for the use of those who have not opportunities for their minute investigation.

Name of Deposit.	Ordinary Colour.	How Affected by				Blowpipe upon Platinum Foil.	Characteristics.
		Boiling Water.	Sol. of Ammon.	Sol. of Potassa.	Acetic Acid.		
Lithic acid	Yellowish-brown	0*	0†	Dissolved	0	Dissipates it entirely	When evaporated to dryness with dilute nitric acid and ammonia subsequently added, a pink colour is developed.
Lithate of ammonia‡	Whitish, pink, brown, & red-brown	Dissolved	Instantly dissolved	Idem.	0§	Idem‖.	Idem.
Phosph. of lime	White, amorphous	0	0	0	Is dissolved without effervescence	Unaltered	Nitrate of silver causes a yellow precipitate in the acetic solution, which is also precipitated by oxalate of ammonia.
Ammonia-co-magnesian phosphate	White, generally crystalline	0	0	0 The odour of ammonia is evolved by heat	Is dissolved without effervescence	Ammonia is evolved, otherwise unaltered	Nitrate of silver precipitates the acetic solution yellow; this, however, is not precipitated by oxalate of ammonia.
Oxalate of lime	White, generally crystalline	0	0	0	0	Leaves an alkaline ash, which efferv. with, and dissolves in, dilute muriatic acid	The solution is precipitated by oxalate of ammonia.
Cystic oxide	White, bluish, or greenish	0	Is dissolved	Is dissolved	0	Entirely dissipated	Crystallizes from the ammoniacal solution on evaporation. When boiled with hydrated oxide of lead, the black sulphuret is formed.
Carbon. of lime	White	0	0	0	Is dissolved with effervesc.	Leaves an alkaline ash	This ash is soluble in acetic acid, and the solution precipitated by oxalate of ammonia.

* 0 signifies no effect.

† Those effects which take place at once or within a few minutes only are noticed.

‡ When lithate of soda is present, the reagents mentioned act much more slowly and imperfectly.

§ Acetic acid decomposes lithate of ammonia, and throws down the lithic acid, so that one deposit occupies the place of the other, and no apparent change occurs.

‖ If lithates of soda or lime are present an alkaline ash is left.

explain such an occurrence. However, I cannot, with some others to whom I have mentioned this circumstance, throw it aside because I am unable to explain its cause. The only explanation I can offer is, that probably it was secreted and retained in a state of solution by carbonic acid, and as this escaped the deposit assumed this form. I did not examine the urine with this view at the time, for the deposit was only discovered by accident some time after the patient had been under my care, and I have never since then met with her. Carbonic acid has been found in the urine dissolving the phosphates in this manner, which have become precipitated by heat, or on exposure to air; and such I imagine must have been the case here. I subjoin a tabular arrangement of the characters of the deposits found in the urine [see p. 830]; the microscopic appearances have been illustrated in the lectures by Dr. Golding Bird, in former numbers of this journal, which, combined with this table, will remove any difficulty in at once recognizing any deposit.

Blood is recognized by the colour it imparts to the urine being destroyed by boiling; the solution then becoming colourless or yellowish, the clot of a chocolate colour; also the microscopic appearance of the globules in the sediment.

Semen is recognized by the increased mucous cloud, (not always apparent, however); the urine is also albuminous. The best evidence is the presence of the spermatozoa; the odour is perfectly valueless. In every case where albumen is present in the urine of a male patient in small quantity, examine the deposit to ascertain if such be caused by the presence of semen.

Pus is recognized by its forming a yellow layer or deposit, which, if mixed with lithate of ammonia, occupies the lowest position, the lithate forming a stratum above it, generally well contrasted by its pink or reddish colour. The urine is albuminous; the deposit is readily diffused through the urine, and has no viscidity or tenacity, but acquires this when mixed with ammonia. The presence of the numerous globules, which have been so frequently described, and the albuminous supernatant liquor, are necessary for the recognition of pus; the one can be depended upon without the other.

Mucus is recognized by its viscidity, tenacity, and glairy characters; the supernatant liquid is not albuminous; the layer formed by mucus in urine is always higher and much less dense than that of pus; moreover, it is not diffusible through the urine like the former; globules quite as perfect, both as regards nuclei, and in other respects, are found in mucus, often acted upon with more difficulty by reagents, as acetic acid, &c. inasmuch as they are enveloped in a gelatinous mass, which temporarily defends them.

For further particulars on the characters and microscopy of this subject, I refer the reader to my "Manual on the Characters of the Blood and various Secretions of the Body," wherein the requisite information on this subject will be found.

TREATMENT OF CHOLERA.

(*For the Medical Gazette.*)

(Extract of a letter to the Bengal Medical Board, dated 27th December, 1843.)

General Hospital, Calcutta.

Sir,

In continuation of my letter of the 15th of September last, to your address, I have the honour herewith to transmit copies of two cases of cholera treated on principles adapted to my ideas of the nature of that disease, as explained in the letter above alluded to.

Under a total cessation of the powers of absorption by the internal surface, it is manifest that little or nothing can be hoped from the internal administration of even the most powerful remedies, and that such is the case in this formidable disease, the experience of the past seven-and-twenty years affords abundant and melancholy proof.

With this impression—I may say with the conviction, that this is the true cause of the utter powerlessness of medicines in cholera, which if given in similar doses in any other disease could scarcely fail to prove destructive—I have lately ventured to adopt a practice in favour of which I have long had a prejudice, viz. the use of long-continued hot baths, during the stage of collapse; not the commonly prescribed hot baths of authors, of from 98° to 104°, and continued only from ten to fifteen minutes, but a bath

of 110° to 115° Farht., and continued for a full hour, or more, according to circumstances, until the restored circulation indicates the removal of that obstruction on which I conceive collapse, in cholera, to depend.

So novel a prescription will doubtless be received with hesitation, possibly with alarm, and did the collapse result from long previous illness, or extreme exhaustion, its application might well be expected to produce, perhaps, fatal syncope; but in cholera the case is difficult: the invasion of the disease is sudden, the patient frequently in high health only a few hours before; and the copious sweats and ejection of chyle (forming, in a dilute state, the characteristic "rice-water" evacuation of cholera) the only visible causes of exhaustion. The disease being sudden and rapid in its progress, it is obvious that the remedy must be powerful and sudden in its action, or a fatal termination, as is too generally the case, be the result.

Thus much in support of a plan of treatment, which, however, the very appearance of the patient serves strongly to indicate, but which will be much better supported by the cases accompanying: and I beg particularly to call the attention of the Board to that of Samuel Brown, who, at 10½ P.M. was evidently relapsing, but again restored by a full hour in the bath (at 110°); declaring, when replaced in bed, that he felt "like a king;" and I had the pleasure next morning to find him comfortable, with a warm skin and soft steady pulse, while two poor fellows, the one admitted an hour before, the other an hour after him into the opposite ward, were being carried out to the dead-house.

I have merely to observe, in conclusion, that these are the only two European cases that I have had an opportunity of treating for some months.—I am, sir,

Your obedient servant,

C. W. RANKIN.

N.B. The cases of spasmodic cholera I have alluded to were treated by hot baths, drastic purgatives (daily), and blisters to the nape on the occurrence of delirium, with ice to the head, and occasionally four and six leeches to the temples.

CASE OF THE SUCCESSFUL REMOVAL OF A LARGE OVARIAN TUMOR.

By Dr. Frederic Bird,

Consulting Accoucheur to the Western Dispensary, Physician to the Metropolitan Hospital and to the Westminster Maternity Charity, and Lecturer on Medical Jurisprudence at the Westminster Hospital.

(For the Medical Gazette.)

On December 28th, I was requested to meet Mr. Hale Thomson, in consultation on the case of Mrs. ——, residing in —— Terrace, Regent's Park, who had long been the subject of a large abdominal tumor. She had just completed her thirty-fifth year; and, until the occurrence of her present malady, had enjoyed previous good health. The catamenial function, developed at the age of thirteen, had, after the lapse of ten years, become irregular, the secretion having been deficient and accompanied by severe dysmenorrhœa. From the pain of the latter she has since continued to suffer; but has also, during the last two years, experienced the frequent occurrence of menorrhagia. She has never borne children, but believes that abortion at a very early period of gestation once took place. About six years ago, after having made some slight, but sudden, muscular exertion, she was attacked with acute pain affecting the right side of the abdomen, midway between the false ribs and crest of the ilium; a distinct swelling at this part having been observed by the medical attendant. In a few days the pain subsided; and in as many weeks the tumefaction also disappeared. Mr. H. Thomson, who was consulted at this period, discovered a small tumor occupying the seat of pain; and on several subsequent occasions was also able to detect it. Notwithstanding the existence of disease, her general health suffered no impairment until the commencement of the past year, when she began to lose strength rapidly, and soon afterwards observed that her abdomen increased in size, the enlargement taking place at the hypogastrium, and did not at first involve either iliac region. Menstruation continued painful, but became menorrhagic; nevertheless, pregnancy

was said to exist, although every indication of gestation, save abdominal enlargement, was wanting. The term of pregnancy expired, and was followed by the more rapid growth of the tumor, and greater deterioration of health. She was at this time seen by an accoucheur of eminence, who at once pronounced her to be labouring under ovarian dropsy. The tumor subsequently increased in size more rapidly than before; and the impairment of health, probably favoured by the mental distress consequent upon the discovery of her unhappy position, became more evident. She began to suffer from almost constant nausea, and frequent vomiting; whilst obstinate diarrhœa, impeded respiration, occasional accessions of fever, and general emaciation, made up the sum of symptoms.

At the period at which I was requested to see her, the abdomen was much and equally distended, slightly retracted at the lumbar regions, but very prominent above the pubis and at the umbilicus; the integuments were tense and smooth, striated longitudinally by many turgid but small veins, and transversely by lineæ albicantes: the total circumference was forty inches. Percussion elicited an uniform dull sound, excepting at the posterior parts of the hypochondria, which were occupied by the tympanitic intestines: the sense of fluctuation was very distinct and equal in every direction; and the most careful manipulation failed to detect the presence of peritoneal adhesions, or of any secondary tumor. The uterus was found small, healthy, very mobile, and had probably never been impregnated. The cavity of the chest was much encroached upon by the tumor, respiration was short and hurried, the action of the heart irritable, and the pulse ranged at 100.

From the consideration of the symptoms presented, there was no difficulty in concurring in the opinion formerly expressed as to the ovarian seat of the disease; and it was obvious that, unless relief were speedily afforded, life could not long continue. Under these circumstances, I suggested the operation for extirpation as the most advisable remedial measure; the attendant dangers, and probabilities of success and failure, being at the same time fully explained to the patient by Mr. Thomson and myself. Before deciding upon the performance of an operation, subsequent consultations were held, when she had the advantage of the opinions of Dr. Locock and Dr. Hamilton Roe, both of whom accorded in the view previously afforded, and gave their sanction to the measures proposed for her relief.

Twelve days now elapsed, during which time the abdomen increased in circumference two inches, and the general symptoms were becoming more urgent; the diarrhœa was, however, arrested, and no longer presented any obstacle to the operation.

January 28th.—The operation was to-day performed, in the presence of Dr. Locock, Dr. Hamilton Roe, Dr. Merriman, Dr. Andrews, Dr. Hodgkin, Mr. Bransby Cooper, Mr. B. Phillips, Mr. Hale Thomson, Mr. Tomes, and Mr. Parrott, of Clapham. The same preliminary measures having been employed as in my former operations, the patient was placed transversely on the bed, with the feet supported over its side to a convenient height. It was now remarked that the tumor projected more at the left than right iliac region; the sense of fluctuation being as distinct at this as in other parts. A roller was applied around the lower part of the chest, with a view of subsequently affording the support to the diaphragm which would be lost by the removal of the tumor; I then made an exploratory incision, about two inches long, in the course of the linea alba, and a little below the umbilicus. The tumor was, at this point, closely adherent, and its parietes very thin; so that, in opening the peritoneum, the cyst was also punctured: a dark-coloured, firm, but small gelatinous mass, jetted out, and so completely filled up and concealed the aperture, that it appeared as if some secondary growth had formed on the exterior of the tumor. The incision was then enlarged to about four and a half or five inches towards the pubis, the adhesions having been ascertained to be short and general, but yielding to moderate pressure; and it appeared at least very probable that they might be removed without difficulty. Dr. Locock, who also examined them, readily and fully confirmed in this opinion; and I then cautiously separated the attach-

ments in the immediate neighbourhood of the wound, and was thus enabled to introduce the flat hand between the abdominal walls and the surface of the tumor: by gentle pressure, the adhesions, which were present over the entire anterior surface of the cyst, were detached, and, excepting in one or two points, with but little difficulty. It was necessary to introduce the opposite hand in order to separate the adhesions on the right side, on which they extended lower than on the left. The great advantage of an incision of moderate size was at this stage of the operation especially observed: the greater part of the abdominal parietes still preserving their tense condition, and the subjacent tumor being as yet undiminished, the adhesions, by the introduction of the hand, became extended, and thus more readily gave way before its pressure. A free incision was next made into the tumor, the edges of which were kept in apposition with those of the external wound, and its bulk much reduced by the withdrawal of a considerable portion of its contents. A firm grasp of the cyst was then made by forceps constructed for that purpose, the abdominal incision elongated to about three inches, and the tumor, in a partially collapsed state, very gently withdrawn from the abdominal cavity, the lips of the incision being most accurately and promptly closed by Mr. Phillips. The pedicle was next secured by three ligatures made to encircle different portions: it was then cut through, and, its vessels having been found effectually secured, returned into the abdomen. The wound was closed by several interrupted sutures, the ends of the ligatures secured, cold water dressing lightly applied, a thin roller of linen drawn once round the abdomen, and the patient moved, by means of a doubled sheet previously placed beneath her, to a more comfortable position in bed.

Scarcely an expression of suffering was uttered by the patient, who, possessed of much moral courage, bore the operation with admirable fortitude. The pulse, at its completion, was observed by Dr. Locock to be 94, marking an acceleration of only four beats.

½ past 2 o'clock — one hour and a half after the operation. — Pulse has risen to 100; heat of surface increasing; neither local pain nor tendency to vomit; sleepless.

℞ Liquoris Opii Sedativ. ʒj.; Decocti Amyli, ʒiij. M. Fiat enema statim injiciendum. No food allowed. Rough ice to be frequently and freely given.

4 o'clock. — Has not slept, but is quite free from pain; pulse 98; urine removed by catheter ʒviij.

8 o'clock.—Still sleepless; arterial action increased; pulse 110, sharper; respiration equal, but more frequent—28; six ounces of urine removed by catheter.

11 o'clock. — Dr. Locock now saw her with me. She had slept half an hour, and was very cheerful and disposed to talk. The pulse still ranged at 110; skin beginning to perspire; tongue natural; urine ʒiv. by catheter.

29th, 2 A.M.—The right side of the abdomen and epigastric region have become distended by flatus; there is some general diffused tenderness on pressure over the whole of the abdomen; heat of surface rather increased; tongue pale; pulse 114, readily compressed, and not contracted. The position in which she lies is not that indicative of peritoneal inflammation; and the local tenderness evinced on pressure may be regarded as the necessary result of irritation consequent upon the detachment of the adhesions, rather than as any evidence of active inflammation. With this view, and for the purpose of assisting in the removal of flatus, she was ordered—

Small quantities of brandy, with hot water, strongly spiced, to be frequently given.

4 A.M. — After a few tea-spoonfuls had been taken, copious eructations followed, the abdomen became much less distended, and she was soon calmly sleeping. Urine ʒvij.

8 A.M. — Has slept at intervals for three hours, and is now almost free from local tenderness and abdominal distension; pulse 108, of good character; skin freely perspiring.

2 P.M. — Dr. Locock also saw her, and did not hesitate to give a decidedly favourable prognosis. Pulse 108; no abdominal tenderness; skin continues to perspire; the position is easy, countenance good, and spirits excellent.

12 P.M. — With the exception of the pulse having risen to 110, she remains in the same state.

30th, 5 A.M. — Has had three hours'

sleep, and is much improved; pulse 100, soft. The upper portion of the wound has quite united; the lower suppurates healthily.

Vespere.—Visited by Dr. Locock, at which time there was some slight re-accumulation of flatus in the transverse colon, but quite unaccompanied by local uneasiness. Thirty ounces of urine had been removed at different periods during the day. Skin still perspiring; pulse 98, natural; tongue clean.

31st.—Remains in the same favourable condition. Urine ℥xxviij. during the day.

Allowed four ounces of water-arrow-root.

Feb. 1st.—Slept well throughout the night; pulse the same; urine ℥xviij.

2d.—Rapidly improving; pulse 84.

Allowed veal broth, with vermicelli, tea, and dry toast. Ice in diminished quantity.

3d.—No alteration. The bowels not having been relieved since the operation, she was ordered—

Olei Olivæ, ʒij. tertia quâque horâ ad quartam vicem.

5th.—The bowels not having acted, she yesterday took the following medicines, which have to-day been followed by copious dark scybalous dejections, partly consisting of fæces long impacted

℞ Pil. Rhæi Co. gr. viij.; Pil. Hydrarg. gr. iss.; Olei Cassiæ, ♏j. Fiant pilulæ duæ horâ somni sumendæ.

6th.—Ligatures tightened. Pulse remains unaltered. Urine passed voluntarily; less in quantity.

10th.—Since the last report she has quickly improved, and her only complaint has been that of hunger. The bowels act regularly; pulse is now 80, and more full. The diet has been cautiously increased, and now consists of a mutton-chop, one egg, beef-tea, and three glasses of claret daily. The temperature of the room, (85° at the time of the operation), has been gradually reduced, and is now about 65°.

March 2d.—It is needless to relate the subsequent reports, and it will suffice to record that convalescence has proceeded rapidly, and without interruption, to the complete restoration of health. The ligatures were removed on the twenty-sixth day after the operation; the wound has quite healed, and, from the contraction that has taken place in the abdominal walls, its cicatrix does not measure more than one-half of its original length. The whole appearance of the abdomen is natural, there being no longer any flaccidity of its walls, or corrugation of integument in the neighbourhood of the wound. Under the use of a generous diet, strength has quickly returned. She has for more than a week quitted her room, and has taken long rides in the Park. The bowels act regularly, and the secretions are healthy. The catamenia, previously irregular, and invariably accompanied by dysmenorrhœa, have been twice present since the operation, normal in character, and unassociated with any of her former suffering, and she is now, in all respects, perfectly well.

The dimensions of the abdomen before and subsequently to the operation were—

	Before operation.	After operation.
Circumference of the abdomen . . .	42 inches	24 inches.
From ensiform cartilage to pubis .	16½ inches	11 inches.

Description of the tumor.—The total weight of the tumor was 35 pounds; it was of an ovoid form, presenting a marked projection at the part corresponding to the left iliac region, where, also, the cyst was very thin. The external surface was anteriorly covered by layers of false membrane, varying in density and strength; in some parts thin and easily lacerable, in others more tough, and of considerable thickness. Small vessels, in great number, ramified throughout the surface, but arteries of rather large size traversed the interior, more abundantly supplying the pelvic portion of the tumor. The pedicle consisted of the right fallopian tube and broad ligament, and contained one large and two smaller arteries. The secretion contained within the cyst presented a peculiar character, and I am happy in being able to record its description by that eminent pathologist, Dr. Hodgkin.

My Dear Friend,—I hasten to comply with thy request, by giving thee particulars of some points I have noticed in the ovarian tumor which thou hast removed with such satisfactory and gratifying results.

I leave the dimensions, attachments, &c., for thy own description, having the preparation before thee, and merely ob-

serve that there was one large principal cyst, which appeared to have originated in the ovary itself, the traces of which I observed over a portion of the walls of the sac, somewhat larger than the open hand, where the sac was thick and dense, and marked by one or more traces of the cicatrices produced by the escape of vesicles of De Graefe. In some other parts the walls of the sac were so thin that I imagine a slight force suddenly applied might have ruptured them. Notwithstanding this tenuity, which is probably to be ascribed to the rapidity of growth, this large sac had completely the characters which I have described under the term of serous cysts. There were a few subordinate cysts, which were probably as large as one's fist, but of their precise size I am unable to speak, as they were opened before I examined them.

I was more struck with the appearance of remarkably small transparent, almost vesicular, secondary cysts which studded different parts of the generally smooth internal surface of the principal sac. Their membranes were thin and delicate, easily giving escape to the transparent viscid secretion, which, in its characters, resembled that by which the larger cyst was distended.

Of this secretion I must now say a few words.

It had, in an eminent degree, that consistence which produces the character which I think is termed tremulous, and furnishes the most deceptive semblance of fluctuation. It is a consistence very common to the contents of compound sacs formed in or near the ovary; but I do not remember to have seen it so firm as in the present instance, except in secondary cysts, the contents of the principal sac being generally more or less fluid.

Although there was a great degree of uniformity of consistence through the accumulated mass of secretion, the different parts varied in colour and transparency—some parts being clear, transparent, and colourless; others tinged with diffused transparent red; others streaked with red; others of an amber or wine yellow; and others turbid, or opaque yellowish white. Although there were no perceptible circumscribing membranes, these several characters did not, for the most part, insensibly run into each other, but each tended to assume a roundly-defined figure, suggesting the idea that, if not the contents of different subordinate cysts, the secretion had taken place in different parts of the sac.

The streaks of red appeared to me to be the result of the extravasation of blood from the walls of the sac, some parts of which were highly vascular, constituting a net-work of distended capillaries. The clearest portions of the secretion when examined with a microscope did not seem to consist of a particled material, but, when viewed in contrast with water, merely exhibited amorphous granular matter. Any distinct particles which it might contain appeared to result from the accidental admixture of the particles characteristic of the coloured portions. The most remarkable of these particles belonged to the secretion where streaked with red. They appeared to be modified blood corpuscles; they had lost their circular figure, and assumed various shapes, either polygonal or elongated, with a great tendency to combination in linear arrangement, more like that of the elliptical particles of bird's blood than the columnar form which the circular particles of perfect human blood are prone to assume. A very common form is that of one particle nearly retaining its circular figure, with two elongated ones attached to it at different and opposite points. To each of these, others were attached in the same direction. I observed several clusters of these particles, which did not consist of a single line of particles, but which were three, four, or more in breadth. I also saw them combined in pairs, and in threes, when they were either polygonal, semicircular, or sectors.

In the turbid portions of the secretion I noticed an infinity of very minute particles, which appeared to be spherical, and although many remained isolated, they seemed to have a tendency to aggregation in small clusters. I observed a very few elongated shapes, suggesting a tendency to the formation of fibrous matter. I did not observe any crystals in the portions which I examined, and I could not discover any of the large nucleated cells, which, though not peculiar to malignant structures, are generally, if not always, to be found in truly fungoid or cancerous matter. Somewhat similar particles are sometimes to be seen in

colloid or gum cancer, to which, in physical characters, the secretion in this case bears a certain resemblance.

My own opinion is, that the adventitious growth in this instance is certainly not malignant, but that it is one of the numerous specimens which justify my adoption of one division of the family of adventitious structures, having the type of compound cysts, to which malignancy, so far as we can fix the meaning of this vague term, does not belong. I have published it as my opinion, which I have not as yet seen cause to alter, that a growth originally not malignant, does not acquire this character by degeneration; but that the additions that subsequent growth may make, may possess this character in one or more of its varieties, which strongly indicates the close relationship of this group, and furnishes the most weighty argument in favour of early and complete removal of the non-malignant examples, in which class many of the ovarian cysts are included.

Thine sincerely,
THOMAS HODGKIN.

To Frederic Bird.

In recording the preceding case, I may briefly refer to one or two points in connection with it, which serve to render it one of the most interesting that has hitherto occurred.

The complete success of the operation, when considered in conjunction with its attendant difficulties, would seem to extend the limits within which it may be advantageously had recourse to. But whilst an inference such as this may be made, the important fact should neither be concealed nor forgotten, that circumstances, and dangers totally unlooked for, and for the previous detection of which medical science has as yet afforded no sufficient data, may present themselves, and render the operation more hazardous as to its performance, and more uncertain as to its result.

With reference to the peritoneal adhesions in this case, it may be briefly said, that there was no evidence of their presence prior to the operation, and the previous history was completely opposed to the idea of antecedent peritonitis. It may, however, be justly questioned whether much importance ought to be attached to the negative evidence afforded by the previous history on this point: there can be little doubt that peritoneal inflammation does frequently occur in the progress of ovarian disease to a sufficient extent to give rise to the formation of adhesions without being manifested by local pain or other of those symptoms which commonly indicate the existence of serous inflammation. Adhesions being present, should they negative the performance of the operation? Much must necessarily depend upon the extent to which they may exist, and the degree of organization they may have attained. Few would be inclined to commence an operation with the knowledge that adhesions were present, but I believe that it may hereafter be found, that the tumor once removed, the adhesions, or rather that changed condition of peritoneum associated with their production, may to a certain extent favour the recovery of the patient by diminishing the liabilities to inflammation. In the present case much manipulation was unavoidably employed in order to detach the tumor, and the operation was coupled with almost every difficulty that might serve to excite subsequent inflammation, yet has the patient recovered even more speedily than in my former cases, in which no such complications existed. It is at least probable that the non-occurrence of inflammation may be attributed partly to the fact, that the peritoneum, by the deposition of adventitious membranes and concomitant changes, had ceased to preserve in a very perfect manner the character of a serous structure, and was not, therefore, in an equal degree subject to the influence of those causes which in its normal state would have been succeeded by inflammatory action. Should more extended experience hereafter establish the correctness of this view, an important collateral circumstance may be met with in the fact, that although extensive adhesions may be present anteriorly, it has been rarely found that they exist posteriorly, and that the floating viscera, which occupy such relative position with regard to the ovarian tumor, will but seldom be found adherent. Such at least is the result obtained from the examination of a large number of recorded cases, as well as in many dissections that have occurred under my own observation.

38, Craven Street,
March 16, 1844.

ON THE DOUBLE SALTS OF IRON.

To the Editor of the Medical Gazette.

Sir,

I very respectfully ask leave to occupy a few pages in the Medical Gazette, in order that I may be able effectually to direct attention to the subject of this paper—a subject which has interested, and continues to interest, the medical profession; and respecting which it is not more than true to say, that an anxious desire has been manifested to obtain information. Hitherto, however, the attempts to gratify this desire have been unsuccessful; and such has been the conflicting nature of expressed opinion, that the public mind has become almost chaotic. It is no easy task to reduce irregularity to order; and I would not be too confident of my ability to accomplish it in this instance. I am the rather diffident, because, whether I look amongst the advocates of chemistry or pharmacy, those who are remarkable for learning and intelligence forbear to make comment: nevertheless, such as I have I modestly submit; and if I subvert but one error—if I give any information that can be turned to a practical account, or if I put others in the way of arriving at that truth which I may have vainly sought for—I am content.

The opinions I entertain will appear in the course of remarks I purpose making on the combinations of the oxides of iron with some organic acids; and these will be regarded with a view chiefly to determine the nature of certain salts called—

Citrate of iron.
Ammonio-citrate of iron.
Ferro-citrate of ammonia.

A short historical sketch of the progress of discovery connected with the matter before us will form a suitable introduction.

Previous to the year 1830 or 1831, the only salts of iron with organic acids which medical practitioners had recourse to, were the acetate and potassio-tartrate, few in number, and these inelegant. Monsieur Beral, of Paris (taking advantage of Soubeiran's application of the hydrated sesquioxide of iron to the purposes of pharmaceutic chemistry), entered on a course of lengthened experiments in the hope of effecting some combination which should have stronger claims upon public attention; and, as the result of these endeavours, he offered to the notice of the medical men of France several new salts, and in particular one which he termed citrate of iron: he published also a formula for its preparation; but this formula differed so much from that used in his own laboratory that, in following its directions, an *insoluble* and *acid*, in the stead of a *soluble* and *neutral*, salt was produced. This was a skilful trick of the inventors, whereby he, for a time, kept its preparation to himself*.

Mr. Aikin, in England, some years back (the precise time is not material) introduced an ammonio-tartrate of iron, and it was employed with beneficial results in practice. This gentleman also pointed out the existence of other compounds, which attracted less notice than they deserved, and fell into disuse.

A new method of preparing the potassio-tartrate of iron, suggested by Soubeiran, and improved, I believe, by Mr. Phillips, was published in the last edition of the London Pharmacopœia.

About two years since, a "citrate of iron," purporting to be similar to that of Beral, was offered on sale, in England, by Mr. Bullock.

Early in the spring of 1842, at which time I was superintendent of the laboratory of Messrs. Savory and Moore, I perfected an ammonio-citrate of iron, the existence of which was made known by advertisement. I shortly afterwards completed a series of chalybeate salts, which the respectable firm I served recognized as interesting, and specimens were sent to the museum of the Pharmaceutical Society: this donation was acknowledged in the October Number of the journal in which the transactions of that Society are published. These were the salts sent:—

Citrate of iron.
Ammonio-citrate of iron.
Sodio-citrate of iron.
Magnesio-citrate of iron.
Citrate of iron and quina.
Citrate of the magnetic oxide of iron.

* I cannot suffer this conduct of Monsieur Beral's to pass without marking my disapprobation. It is a pity that men whose names are honourable in pharmacy should so far lend themselves to a selfish and mercenary spirit, as to conceal the nature of a remedy intended for public use, and to adopt a phraseology professedly scientific, but which is inconsistent with the admitted rules of nomenclature.

Ammonia-tartrate of iron.
Potassio-tartrate of iron, *P.L.*
Tartrate of the magnetic oxide of iron.

In making this statement I am anxious not to be misunderstood; I am particularly anxious so to express myself that I may not appear to claim as the result of my own observation what justly belongs to others; I do not contend for priority of discovery in more than one case, *i. e.* the citrate of iron and quina, although, as will be seen, I arrived at the completion of others in an independent manner: the *amber-coloured* citrate of iron and quina, the salt now in use, most certainly originated with myself, and was deposited in the museum of the above-named society long before any other manufacturer had perfected the combination. I frankly acknowledge that my notice had not been directed towards the citrates of iron until Mr. Bullock's preparation (ferri citras) appeared; I had never experimented at all on the action of citric acid on the *sesqui*oxide of iron before that period, but I had devoted much time to the action of tartaric acid on the same oxide, in consequence of the uncertain results I met with in making the potassio-tartrate *P.L.*, and this circumstance rendered the transition from one class to the other comparatively easy. At the time I produced the ammonio-citrate before alluded to, I was totally ignorant of the compound nature of the salt used on the continent, and brought into notice in England by Mr. Bullock, and it was some time afterwards that I learned that it was other than it pretended to be. My own experience assured me that the *true* citrate of iron was insoluble, or nearly so, in cold water, and this induced me to examine Monsieur Beral's and Mr. Bullock's "citrate." The first experiment was conclusive; a little hydrate of potash was added to a strong solution of the suspected article, heat was applied, and immediately there was a plentiful evolution of ammonia: this result was communicated, and I then asserted (as was afterwards done more publicly), that the term citrate of iron, when applied to a salt which was neutral and soluble, was a misnomer and deceptive; that it misled the physician in an important manner; and the adoption of names was urged "which would indicate the composition of the bodies to which they are attached." I believe this was the first time that the propriety of Monsieur Beral's name had been called in question, and it is a satisfaction to me to find that the erroneous nomenclature is being gradually abandoned. I am fully aware that Mr. Bullock has resisted this statement, but there is surely much that is contradictory in the opposition he offered; and I do think that even to himself it must appear inconsistent: by way of example, he applies the term—

Citrate of Iron and Potash, to a salt consisting of Citric Acid, Iron, and Potash.

Citrate of Iron and Soda, to a salt in which soda is the third constituent.

Citrate of Iron and Magnesia, to one in which magnesia is present.

But when ammonia stands in a similar relation to the acid and iron, it is not, according to the same authority, to be called citrate of iron and ammonia, but citrate of iron, and the simple salt with which it is likely to be confounded goes anonymous. Mr. Bullock has also identified his preparation with that sold by the French pharmaceutists, whose language is,* "the true name of Monsieur Beral's salt ought to be ammonio-citrate of iron; this point is incontestible." He has stated, moreover, that without ammonia his own salt would be difficult of solution. With what grace, then, do we find him subscribing to the assertion, that the ammonio-citrate of iron is an untried preparation in practice? I do hope that Mr. Bullock will reconsider his observations, that he will retract what he may have said in haste, that he will use his talents in clearing away the difficulties and embarrassments which surround this most interesting question, and be found among those whose high ambition is, to gain a reputation by a straightforward and manly endeavour.

Three oxides of iron require to be mentioned as capable of forming salts with the organic acids—the protoxide, the sesquioxide, and what is commonly called the magnetic oxide. The last named cannot, according to Turner, "be regarded as a definite compound of iron and oxygen, but is composed of two real oxides. It frequently occurs crystallized in the form of a regular octo-

* See Pharmaceutical Journal, Vol. I. p. 653.

hedron and dodecahedron, and it is not only attracted by the magnet, but is in itself sometimes magnetic." It has been of late years artificially prepared by precipitating the two oxides from their solution in sulphuric acid, by means of carbonate of soda, and afterwards boiling the precipitate to drive off the carbonic acid. I purpose, at this time, confining myself exclusively to the combinations of the sesquioxide, reserving the two others till some future opportunity: let me observe, however, in passing, that they are capable of forming double salts of less beauty, though possibly of more value, than those I shall now consider.

The acids I have experimented on are the citric, tartaric, and acetic.

The MEDICAL GAZETTE for 1843, Vol. xxxii. p. 836, contains a speculation somewhat ingenious, by Mr. Mowbray, the author supposing that in some cases where citric acid is employed the elements of the acid rearrange themselves, and form aconitic acid: the whole is purely hypothetical.

Other persons have conjectured that a saccharine principle is occasionally generated.

Then, again, it has been asked, is ferric acid an ultimate ingredient in the double salts of iron? This is a more difficult problem to solve: for a long time I entertained this opinion, but latterly nothing has occurred with me which strengthens the assumption; I shall therefore dismiss these hypotheses, not because I have the impression that ferric acid, a saccharine principle, or aconitic acid, cannot under some circumstances be produced, but because I believe there are instances in which none of these supposed changes take place.

I intend to regard them as composed ultimately of the acids and bases respectively employed in their preparation: 80 and not 40 will be reckoned as the equivalent of sesquioxide of iron: in other respects the proportionals adopted by Mr. Phillips in his translation of the Pharmacopœia will be followed here.

There is peculiarity in the behaviour of the different acids, which forbids my remarking on them collectively.

I shall commence with the action of citric acid on the hydrated sesquioxide of iron.

[To be continued.]

FUNCTION OF THE SPLEEN.

To the Editor of the Medical Gazette.

SIR,

THERE are three vascular systems—an hepatic, a pulmonary, and a general. Each system consists simply of an afferent vessel, and a set of efferent vessels, with intermediate capillaries. 1. The hepatic afferent vessel is the portal vein and ramifications, and its commencement is the spleen. 2. The pulmonary afferent vessel is the pulmonary artery and ramifications, and its commencement is the right half of the heart. 3. The general afferent vessel is the aorta and ramifications, and its commencement is the left half of the heart. 1. The hepatic efferent vessels are the hepatic veins. 2. The pulmonary efferent vessels are the pulmonary veins. 3. The general efferent vessels are the gastric, duodenal, and mesenteric veins, and the superior and inferior cavæ, and the coronary vein.

Now, according to Harvey's doctrine, the *heart* is the only organ concerned in the circulation; and the right ventricle propels the blood through the lungs, and the left through the rest of the body: in other words, one half of the heart propels the blood through *one* of the three vascular systems—the pulmonary, and the other half through *both* the other two systems —the general, *and the hepatic*.

Now, as we have implicitly believed this for the last two centuries or so, and during that period have been unable to understand the use of the commencement of the hepatic afferent vessel, is it not about time that we began to doubt a little as to whether the commencement of the *general* afferent vessel is really so obliging as to propel the blood through the *hepatic* system? Would it not be well carefully to examine the whole of the hepatic afferent vessel (spleen, splenic vein, portal trunk and branches), and see whether it is not *itself* adapted for propelling the blood through the hepatic system? And whether its commencement is not for the purpose of communicating motion to the blood, by contracting, and consequently generating propulsive force, as well as the commencement of the pulmonary and general afferent vessels? And whether, as the hepatic afferent vessel differs so materially from

the pulmonary and general afferent vessels, the motion of the blood through the hepatic system is not therefore, and in consequence of that difference, *intermittent and slow*, instead of being constant and rapid, like the motion of the blood through the pulmonary and general systems? And whether the true reason that the commencement of the hepatic afferent vessel is twice as large, relatively to the liver, in man as in quadrupeds, is not because the blood has to be propelled through that organ vertically in the former, and horizontally in the latter? And whether the use of the splenic artery is not simply to be split up into capillaries, for the commencement of the hepatic afferent vessel to originate from? And whether the remarkable tortuosity of that artery is not for the purpose of preventing any considerable or undue quantity of arterial blood from running hot-foot on a foolish errand (pardon the simile!) into the hepatic afferent vessel? With several other *whethers*, "quæ nunc perscribere longum est."

Is it not about time, too, that we gave over fancying that those organs *make* blood, which receive blood, and nothing else, ready made? or of altering blood, or "effecting a peculiar change upon it," when it is plain they neither can add anything to it, nor eliminate anything from it? And, lastly, may we not reasonably begin to suspect that every organ, into which nothing besides blood goes, and out of which nothing besides blood comes, is, as well as the heart itself, subservient, in some way or other, to the circulation or motion of the blood?—I am, sir,

Your obedient servant,

J. J.

March 4th, 1844.

MEDICAL GAZETTE.

Friday, March 15, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE PROTECTION AND TREATMENT OF THE INSANE.

NOT only the public, but even the mass of our profession, are but slenderly acquainted with the vast gap which still exists in the protection and treatment of insanity: they do not know what crowds of lunatics are not treated at all, what crowds are treated injudiciously! Our readers will have learned from our late article on the neglect of the insane poor in Scotland*, that in three counties alone 200 lunatics are wandering at large.

In England, matters are somewhat better than this, but still very bad; *how* bad, may be seen from a sensible pamphlet written in 1843 by Dr. de Vitré of Lancaster. Last year only fifteen counties possessed asylums, but we believe that the Devonshire one is now completed, making the number up to sixteen. Of these, several are full to overflowing, among which we may cite the one at Hanwell; indeed, in Middlesex several hundred pauper lunatics are in workhouses, or in other asylums, or boarded out. Here is an enormous gap to be filled up.

Criminal lunatics, again, form a class of patients very troublesome in a county asylum, as they require more than usual vigilance on the part of the superintendent. The number of these wretched beings, however, is so small, that we do not think with Dr. de Vitré that it can be necessary to build asylums for their exclusive use. Bethlem (with an additional gallery or two, if necessary) might easily accommodate the seventy-one patients of this formidable class now confined in our public institutions, besides the individual cases which may still linger in jails or private asylums.

The Poor-Law Commissioners, in a letter of instructions to Boards of Guardians, which they issued a couple of years ago, observed, that "the detention of any curable lunatic in a workhouse is highly objectionable, on the

* MEDICAL GAZETTE, Feb. 9, 1844.

score both of humanity and economy." And they add, that even the confinement of incurable and harmless idiots in a workhouse is often attended with serious inconveniences.

Yet even in the county of Lancaster, with its large asylum, a great number of lunatics are retained in Union workhouses; for the county institution is filled to overflowing, and contains 616 patients, though built for 600 only.

During the period that the Union house at Liverpool was at the height of its mismanagement, in 1842, this part of its affairs was of a piece with the rest: "in the return for Liverpool, made in July last, it was asserted that all their lunatics were in the county asylum, and that they had none in their workhouse, nor boarded out; whilst, in the investigation into the management of their poor-house in the beginning of the present year [1843], it appeared not only that there were persons of unsound mind in that ill-conducted establishment, but that there were wards peculiarly appropriated to the insane; and that Mr. Clements, the Assistant Poor-Law Commissioner, after minutely inspecting the whole of the poor-house, had promised *that all the lunatics* should be removed from the house. And, in accordance with this promise, 'some of them had gone to Lancaster, and others to the *Liverpool Asylum, where they ought to have gone long before.*'"

Nor are the lunatics in other divisions of the same county disposed of in the best manner. Thus of fifty-three lunatics belonging to the Blackburn Union, only nine are in the County Asylum, the remainder being in the workhouse.

Again, in the Bolton Union, out of fifty-six lunatics only nineteen are in the County Asylum; twenty-nine are in the workhouse, and eight reside with their friends at a weekly allowance. "Now this workhouse has no wards specially set apart for persons of unsound mind, is only under ordinary circumstances visited by the medical officer three times a week, and it is this very house where a poor woman was recently removed to the dead-house *previous* to death, by a drunken nurse who was employed at five shillings a week to attend the sick. On an inquiry being instituted, it was found that this establishment was so overcrowded, that in one bed-room, containing four beds, no less than sixteen persons were huddled together to sleep."

There is, however, a numerous class of lunatics whose condition seems to be even worse than the state of those who are immured in a union workhouse; we mean those unfortunate patients who are kept in cottages for two or three shillings a week—a payment which includes board, lodging, and clothing!

In such cases, the persons to whom the lunatic is committed have no means of securing him, but the most cruel coercion, and the patient runs the risk of becoming an idiot, or a beast, through sheer neglect. Dr. de Vitré gives some instances of this kind. In one, a pauper, who had been of weak intellect from his infancy, was confined by his parents in a cupboard beneath the staircase of a country cottage. His body had become compressed and contracted by this terrible confinement, and at the age of twenty-eight, when he was removed to the County Asylum, his trunk was bent upon his thighs, and these again upon his legs, so that the knees were under his arm-pits, and literally served him as crutches to rest upon! Sometimes he rested on the sacrum, which was covered with indurated skin. From disuse of the eyes, he was blind, or nearly so, the eyelids being habitually closed. Occasionally, however, he would sit facing

the sun, and open his eyelids, when a small cornea was perceptible. He died after a few years' residence at the Asylum, without any improvement.

In another instance, a woman had been fastened to a bedstead for nearly thirty years. When brought to the asylum, she had entirely lost the use of her limbs, and could not even balance herself on her feet. By removing all fetters, and with a proper course of treatment, she recovered; but, as she did not belong to the county, she was removed by the overseers, *on account of the expense*, as soon as they were convinced that she was not dangerous.

There is a class of cases precisely similar, where the lunatic has a small income of his own, and is taken care of by some near relation. He is at first treated with kindness; but as time wears on, and the patient becomes more troublesome, he is chained in a cellar, abandoned to the care of a servant, and rarely visited by his natural protector. When his funds are exhausted, such a patient is often sent to an asylum as a pauper, and then the whole history comes out.

A patient of this class, near Lancaster, after his money was spent, was regularly farmed out by the parish to the lowest bidder!

A cottager in Gloucestershire, when he left home, used to screw up his wife in a packing-case, with a small hole cut in the lid. She was ultimately set free by the interference of two medical practitioners, was removed to a public asylum, and cured there.

There is again another class of cases, where the family is not indigent, but where, from sheer stupidity, or inveterate ignorance, the patient's interests are wholly neglected. The son of a yeoman in a southern county had an attack of mania. The father, who refused to send him to an asylum, first chained his son, and afterwards thrust him into a dark hay-loft, where he remained for years. It would seem that a case of this kind is an exception to Blackstone's axiom, that for every wrong there is a remedy. The Secretary of State and the Lord Chancellor were both applied to; but the former could not interfere because the lunatic was harmless, and the latter because he had no property. At last the father died; and the son being then possessed of property, a commission of lunacy was issued to take care of it. He was now quite blind, the cornea of both eyes having ulcerated during his confinement.

In many instances, the maniac wanders as he pleases, like the two hundred lunatics who roam through the counties of Dumfries and Wigton, and the stewartry of Kircudbright. In some of these cases the patient is thought to be only whimsical or eccentric; yet, should he commit a murder, a host of relations and acquaintances rush into the criminal court, and swear that their unfortunate friend has long been as mad as a March hare. And thus our Macnaughtens escape condign punishment, while the wise shrug up their shoulders, and wonder at, without admiring, the refinement of forensic medicine!

It must be confessed that mundane government would be much easier than it is, if the difficulties of legislation were only on one side of a question; unfortunately, they are almost always on both, and to trim the balance, requires a Solon. Thus it would be extremely difficult to authorise by law the interference of strangers in cases where the lunatic roams at large, and his relations do not think it necessary to confine him. As a general rule, such interference would go against the grain, and would be called intermeddling. "If we shut up all the women who

change their minds every minute," asks a physician in a popular novel, "who is to make our shirts and puddings?" "And if we shut up all the men," the public would cry, "who have something odd about them, who is to make our hats and shoes?"

This difficulty, however, will not apply to cases where the lunatic commits acts of violence, as the public feeling would then be with the person interfering. Still less would there be any difficulty in those cases where the unfortunate patient is chained by his relations in a cellar or a loft, and treated like a wild beast—for here the honest indignation of all mankind would glow on the side of the liberator of the oppressed. If, therefore, Dr. de Vitré is right in his law (*sed quære*, as the lawyers say), if there is no redress for such a case as that of the yeoman's son above narrated, the sooner the law is altered the better.

We would also recommend that the inspection of the Commissioners should be extended to those cases where a single lunatic is confined by himself. Even a lunatic in good circumstances is not always treated with decency. In a remarkable instance of this kind on which the Lord Chancellor of Ireland commented in January 1843 (*in re Spread*), the lunatic was found stark naked, in an out-house, with his legs clenched and chained together, and fastened by a chain only two feet long, without straw, and unable to lie down so as to rest himself.

COLLEGE OF PHYSICIANS.

A MEETING of the Fellows of the College of Physicians was held on Wednesday, for the purpose of choosing a successor to Sir Henry Halford. It was generally understood that Dr. Paris was to be the new President, and accordingly at the close of the ballot it was found that he had been duly elected.

SIR JAMES GRAHAM'S MEDICAL REFORM BILL.

A FEW evenings ago, on a question being put to Sir James Graham on the above subject, he replied "that he should be prepared before Easter, or immediately after, to introduce a measure generally affecting the medical profession throughout the United Kingdom, not increasing but relaxing the restrictions on the practising of medical men."

We understand that the chief provision of the new bill will be the establishment of a Council of Health and Medical Education for the government of our profession.

It will be composed of one of the Secretaries of State; the Regius Professors of Physic at Oxford, Cambridge, and Dublin, and one of the Edinburgh medical professors; three physicians and three surgeons as representatives of the Royal Colleges of England, Scotland, and Ireland; six other persons (laymen, probably) to be appointed by the Queen; and a representative of the provincial practitioners of England.

The Queen will appoint all the members of the first Council, except those who will sit by virtue of their office.

The three grades of the profession will be preserved.

No one will be licensed to practise as a physician till he has attained the age of 26, nor as a surgeon, till he is 25; but licentiates in medicine and surgery (general practitioners) will be allowed to commence practice at 21.

The new council will entirely overrule the existing medical corporations, who will do little more than register its decrees.

Such, we believe, will be found to constitute the chief points in the new measure; we refrain, however, from all comment till the Bill itself, or an authentic draft, is before us.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Saturday, March 2, 1844.

THE PRESIDENT IN THE CHAIR.

On the Early Organization of Coagula and Mixed Fibrinous Effusions, under certain conditions of the system. By JOHN DALRYMPLE.

THE object of this paper was to confirm an observation published by the author in the

twenty-third volume of the Transactions of the Society, as to the organization of a clot of extravasated blood in a man dying of scurvy. Some doubt had been thrown upon the presumed nature of this clot, and the character of its vessels, by Mr. Travers, in his recent able and elegant work upon inflammation. A fresh example of a similar coagulum, injected by Mr. Busk, of the Dreadnought Hospital Ship, gave the author an opportunity of more minutely examining its condition, and proving its organization.

In the knee-joint of a Lascar, who died of scurvy, Mr. Busk found several clots of extravasated blood. Some floated loose in the fluid; others were attached to the synovial membrane of the capsule of the joint. The attached clots were minutely injected; but, independent of the vascularization, the fibrinous materials of the blood (the white corpuscules) were found in various stages of development into tissue. There were normal white corpuscules; simple nucleated cells, the cells becoming elongated and caudate; others more elongated, and often bifid; and at last the elongation into filament, as the final conversion into tissue. All the cells were nucleated, and had nucleoli. Interspersed among the cells and filaments were innumerable perfect blood-discs, which gave the clot a dark-red or nearly black colour.

The loose coagula were of course non-vascular; yet the fibrinous corpuscules had commenced a process of organization, and were converted into elongated and nucleated cells; these were equally interspersed with normal blood-discs, and equally darkly coloured.

After some remarks upon the cachectic condition of the subjects of these extravasations, the author concludes by stating, that it is not now, nor ever was, by him, contended that ordinary extravasations of blood in the healthy body become organised, but rather that the tendency is towards degradation, disintegration, and absorption, than advanced development in the blood so effused.

On the Composition of the Meconium, and of the Vernix Caseosa, or Lubricating Matter of the New-born Infant. By John Davy, M.D. F.R.S.L. & E.

The microscopical character of meconium is very distinctive, and well displays its compound character; it exhibits a confused mixture of globules, plates, and molecules. The globules, about 1-3000th of an inch in diameter, are very abundant, and form a principal part of the whole. Judging from their form and size, and their insolubility in water and alcohol, they may be inferred to consist chiefly of mucus. The plates are of two kinds: one of irregular form, varying in form from about 1-2000th to 1-1000th of an inch in diameter—insoluble in water, hot or cold alcohol, the dilute acids and alkalies—like epithelium scales, which the author believes them to be. The other kind of a regular form, of great thinness and transparent, insoluble in water and acids, and in cold alcohol, but soluble in hot; properties indicative of cholesterine. The molecules vary in size from 1-8000th to 1-20,000th of an inch in diameter; and being insoluble in water, and soluble in alkaline ley, may be considered as consisting chiefly of fatty matter.

Besides these ingredients, to which the meconium owes its thick consistency and viscid nature, there is another portion from which the mass derives its colour and taste, and probably its power of resisting putrefaction, and which seems identical with the sapid and colouring matter of the bile. The specific gravity of meconium exceeds that of water; it sinks in a saturated solution of common salt of the specific gravity 1148. The quantities of meconium which the author has obtained have been too small to admit of accurate analysis; but in a specimen obtained from a healthy child immediately after birth, the proportion of ingredients was determined, and the results per cent. were about as follow: these proportions, he believes, may be considered pretty correct:—

23·6	mucus and epithelium scales.
·7	cholesterine and margarine.
3·0	colouring and sapid matter of bile and oleine.
72·7	water.
100·0	

A portion of the same meconium was incinerated; it burnt with a bright flame, and left ·69 per cent. of reddish ash, chiefly peroxide of iron and magnesia; with a trace of phosphate of lime and common salt.

The *vernix caseosa*, examined under the microscope, is found to be composed of granules, plates, and molecules. The plates constitute the principal part; they have the properties of epithelium scales; the granules, those of fatty matter; as also the molecules. The plates are insoluble both in weak acids and alkaline ley, and in hot and cold alcohol; are of irregular form, varying in size from about 1-666th to 1-1000th of an inch in diameter. The vernix is apparently lighter than water, on which it floats; but this is owing to the air entangled in it. If subjected to the action of the air-pump immersed in alcohol, it sinks in water at 60° Fah.; a specimen thus treated was of the specific gravity 10039. Of a butyaceous consistence in its ordinary state, at a tem-

perature of 60°, it hardens on reduction of temperature, and becomes almost semi-fluid when its temperature is raised, as to 100°—admirably adapting it for a lubricating substance in parturition.

A single specimen of the lubricating matter, of great purity, was subjected to analysis, and found to consist of—

13·25 epithelium scales.
5·75 oleine.
3·13 margarine.
77·87 water.

100·00

The author remarks that, theoretically considered as regards the origin of the two substances, the preceding results seem to point out distinctly that both are excretions; the meconium chiefly derived from the liver, and the lubricating matter from the skin. He alludes to the opinion of M. Raspail, that a portion of the meconium consists of intestinal villi, but says he has in vain sought for the appearances which M. Raspail describes.

Vauquelin and Buniva, from examination of the lubricating matter, were led to infer that it is not an excretion from the infant, but a deposit on its surface from the liquor amnii. This opinion, the author remarks, does not require to be controverted. Bichat rejected it, from the circumstance that no such deposit is found on the umbilical cord, and on the inner surface of the amnios; and came to the conclusion which seems most just, that it is derived from the skin of the fœtus, and is a secretion similar to that which takes place after birth from many parts of the cutaneous system.

Account of a Specimen of Partial Fracture of the Neck of the Thigh-bone; and of the proper Source of Nutrition of the Head of the Bone. By T. Wilkinson King, Esq. [Communicated by B. B. Cooper, Esq., F.R.S., &c.]

The specimen described by the author, and which was exhibited to the Society, was obtained from a patient 72 years of age, who died of pneumonia, fifty-four days after having received an injury to his hip. The neck of the femur was nearly divided by fracture at its narrowest part; all that retained the fragments in union being one-third of the shell, at its upper and anterior part. The head was deflected backwards, and the buttress of the neck was driven into the cancelli about a third of an inch. The soft tissues were healthy. The only trace of new ossification was at a point on the base of the buttress. The author then referred to other cases on record, of a similar partial fracture of the cervix femoris.

He afterwards proceeded to detail some observations which he had recently made of the arteries which supply the head of the thigh bone. He has found that the artery which goes to this part while it is an epiphysis, is persistent through life: it is a large terminal branch of the internal circumflex artery, which enters a foramen a little behind and below the highest point of the neck of the femur; after this, it curves over the denser layer of cancelli left by the union of the epiphysis to the shaft, directing its course beyond the insertion of the round ligament, to which, he thinks, it furnishes nourishment. He concluded by making remarks on the influence which this vessel may possess, in cases of fracture of the neck of the femur, in preserving the vital actions of the head of the bone, and assisting the process of union by ligament; as in examining specimens of that kind, he has observed that it takes a course when it is not liable to be torn by the injury which produces the fracture. In a note appended to his paper, the author mentions that he has found a vessel supplying the head of the humerus, which pursues an analogous course to what which goes to the head of the femur; that is, it passes specially, by a foramen in the cervix, to the part which was originally an epiphysis. The paper was illustrated by drawings.

The Influence of Weather on Disease. By John Webster, M.D. F.R.S. &c.

Even so early as the days of Hippocrates, the influence of weather in the production of disease was the subject of observation. Since then, physicians, both ancient and modern, have occasionally alluded to some of the points discussed in the present communication. With the view of bringing these interesting questions under the notice of the Society, the author stated various facts respecting the prevalence of particular diseases at different seasons, which he had collected whilst one of the physicians of the St. George's and St. James's Dispensary; where regular reports of the weather, and its changes, with a register of the prevailing diseases were kept by Dr. Gregory, and himself, during a series of twelve consecutive years. Numerous tables illustrative of the maladies met with during the year are given, from which it appears that affections of the chest were more common during cold than mild weather; whilst fevers and abdominal complaints came much oftener under observation in spring and summer than at other seasons.

According to a return of all the medical patients admitted, April was the most unhealthy month of the year, December being the most salubrious. Respecting the general character of disease, those of the chest were comparatively the largest in proportion, con-

stituting upwards of 27 per cent. of the entire admissions. Affections of the abdominal viscera were next, being 26 per cent. of the whole. Then fevers, which comprised 15·50 per cent.; other forms of disease being likewise enumerated. From these tables it appears, that chest affections were most numerous in January, and least so in September; whilst complaints of the abdominal viscera were most common in August; but April exhibited the largest number of fever cases, December and March the fewest.

Some details are next given respecting pneumonia and pleurisy, shewing that the cold weather of January was most inimical to patients predisposed to these affections, of which very few cases were met with during the warm weather of August. The remarkable infrequency of inflammatory diseases of the organs of the chest, subsequent to the appearance of the cholera in London during the year 1832, is afterwards adverted to by the author, since which time similar affections became not only less numerous at the Dispensary, but the antiphlogistic treatment, hitherto so useful, required to be adopted with the greatest caution.

Few complaints appeared to be more modified by particular kinds of weather than those in which a discharge of blood took place from an internal surface; hæmoptysis being the disease of that description most frequently met with; of which fewer cases occurred during the colder months of the year, than in the warmer weather of spring, and the beginning of summer, as shewn by the fact, that out of 107 patients attacked with spitting of blood, only five took place in all the twelve Januarys referred to, whilst seventeen cases occurred in the April months.

The author afterwards alludes to the influence which particular seasons exert upon febrile diseases, eruptive complaints, affections of the head and nervous system, as also upon local diseases. Subsequently a table is given of the proportion of the patients cured and died during the different months of the twelve years included in his paper; according to which return more patient swere discharged cured during the months of November and September than at any other period of the year; December and January shewing the fewest; whilst the proportion of deaths was greatest in February, but smallest in April. Diseases affecting the abdominal viscera were most fatal in September, fevers in August; affections of head and nervous system in October and May; whereas eruptive complaints exhibited the great mortality in September.

After some observations respecting t e difficulty of drawing correct conclusions respecting the influence of weather on disease, the author states, among other opinions, that menorrhagia occurred oftenest with south-westerly winds, and especially after thunder; whilst rainy and windy, or stormy weather, with a falling barometer, occasioned hæmoptysis; whereas clear, frosty, and dry weather, accompanied with northerly winds, favoured the appearance of scarlatina. Other illustrations are also given, drawn from a careful examination of the registers kept at the Dispensary, and from the author's personal observation, which he hopes will be viewed simply as an attempt to elucidate a very intricate question, and one hitherto but partially investigated.

Mental diseases, like those affecting the body, appear to be influenced also by the varieties of season; to illustrate which proposition, the author gives an elaborate table of the total number of male and female lunatics admitted into Bethlem Hospital during the different months of the last twenty-one years. According to that statement, insanity was more prevalent during the warm weather of summer, than in the mild or cold season; more female patients having been received in May, and males in July, than in any other month of the year; the mortality being just the reverse; that is, more deaths took place in January, than at any other period, and the fewest in the warm weather of June, when only 3·28 per cent. of deaths are reported; whereas in the January months the proportion of fatal cases was 10.91 for every 100 patients admitted.

The ratio of cures was also considerably influenced by the season of the year, since more patients were discharged convalescent in the autumn, and when the weather became temperate, than either in the spring or summer; for example, during the months of May, the per centage of patients discharged cured was only 37·47; whilst in the Novembers it rose to 67.23 per cent.

After making some general remarks upon the different points embraced in his paper, the author concludes with expressing a confident hope, were the subjects now adverted to investigated in the manner their importance deserves, much useful information would be obtained; particularly if the inquiries were carried on under the superintendence of the medical officers of public institutions, where similar investigations can be best pursued, so as to arrive at satisfactory as well as instructive conclusions.

DANGEROUS MISTAKE IN THE FRENCH CODEX.

In our number for October 30th, 1840, page 222, we gave the receipts for two pur-

gative emulsions taken from the French Pharmacopœia. One is made with twelve grains of jalap, and flavoured with two drachms of orange-flower water; the other is made with twelve grains of scammony, and flavoured with *two drachms of cherry-laurel water*. This would probably be a fatal dose, and we therefore spoke too cautiously, when we said, "on account of the depressing effects of this remedy, we apprehend it would be better, in many cases, to substitute orange-flower water as in the previous formula."

This dangerous mistake exists both in the original Paris edition of the codex, and in the Brussels reprint.

Soubeiran gives a similar formula, which he calls *Potion purgative de Planche*, but it contains only six grains of scammony, and is flavoured with only *four drops* of cherry-laurel water.—*Nouveau traité de Pharmacie, par E. Soubeiran, seconde edition*, tom. i. p. 664.

FREDERICK THE GREAT'S ANTI-PHLOGISTIC REGIMEN.

ZIMMERMAN, in his narratives of his interviews with Frederick the Great, of Prussia, says, "To-day the King had taken a great quantity of soup made as usual of the strongest gravy drawn from the most healing things. With his portion he mixed a large table-spoonful of pounded mace and pounded ginger. He then eat a large slice of beef stewed in brandy. This he followed up by a copious allowance of an Italian dish, composed half of maize-flower and half of parmesan cheese; to this is added the juice of garlic, and the whole is fried in butter till it acquires a crust as thick as one's finger. This favourite dish is called *polenta*. At length, (continues Zimmerman), the King, praising the excellent appetite which the dandelion had given him, concluded the scene with a large plate of eel-pie, so hot and so highly seasoned that it seemed to have been baked in hell; while at table the King fell asleep, and was seized with convulsions.

FOTHERGILLIAN MEDAL.

THE Fothergillian gold medal was presented to Mr. Robarts (not *Roberts*, as stated by mistake last week), of Great Coram Street, for an essay on scarlet fever.

BOOKS RECEIVED FOR REVIEW.

Illustrations of the Theory and Practice of Ventilation; with Remarks on Warming, Exclusive Lighting, and the Communication of Sound. By D. B. Reid, M.D. F.R.S.E. &c. &c.

A Manual of Medical Jurisprudence. By Alfred S. Taylor, Lecturer on Medical Jurisprudence and Chemistry in Guy's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LIST OF GENTLEMEN ADMITTED MEMBERS.

Friday, March 15, 1844.

J. C. Richardson.—H. Owen.—W. Fisher.—E. Cheshire.—J. Watts.—W. W. Howard.—C. D. Shephard.—E. Hancock.—W. B. Herapath.—G. E. F. Hatch.—A. Beardsley.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, March 14, 1844.

J. W. West, Poole, Dorset.—G. Padley, Swansea.—B. J. Webb, Exeter.—J. D. Hunter, Lockwood, Yorkshire.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, March 9, 1844.

Dropsy, Cancer, and other Diseases of Uncertain Seat	96
Diseases of the Brain, Nerves, and Senses	156
Diseases of the Lungs and other Organs of Respiration	375
Diseases of the Heart and Blood-vessels	50
Diseases of the Stomach, Liver, and other Organs of Digestion	65
Diseases of the Kidneys, &c.	12
Childbed	8
Paramenia	0
Ovarian Dropsy	1
Disease of Uterus, &c.	1
Arthritis	0
Rheumatism	3
Diseases of Joints, &c.	4
Carbuncle	0
Phlegmon	0
Ulcer	0
Fistula	0
Diseases of Skin, &c.	1
Old Age or Natural Decay	63
Deaths by Violence, Privation, or Intemperance	12
Small Pox	16
Measles	32
Scarlatina	40
Hooping Cough	43
Croup	9
Thrush	5
Diarrhœa	4
Dysentery	2
Cholera	0
Influenza	7
Ague	0
Remittent Fever	0
Typhus	31
Erysipelas	1
Syphilis	1
Hydrophobia	0
Causes not specified	2
Deaths from all Causes	1030

NOTICE.—We have to acknowledge the receipt of communications from Dr. Ritchie, Dr. Heaton, Mr. Hemingway, Mr. Jones, Mr. Wilde, Mr. Warwick, Mr. Barker, Mr. Simpson, J. A., T.H.B., A Reader, Medicus.

WILSON & OGILVY, 57, Skinner Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, MARCH 29, 1844.

ON DIFFERENT FORMS OF GRANULAR DISEASE OF THE KIDNEY.

By J. D. Heaton, M.D.

[Concluded from p. 715.]

(For the London Medical Gazette.)

In addition to the five cases already detailed, two others occurred during the three months of the summer session of 1841, which were both suspected to be the same disease, though no opportunity of verifying this supposition was afforded by a post-mortem examination.

The first of these was a man 65 years of age, admitted under Dr. Williams on the 8th of June, a tailor, of emaciated appearance; habits temperate. He came into the hospital suffering from a variety of disorders. The report states that he has long been affected with various dyspeptic symptoms; and for a considerable time has had a troublesome cough, with occasional expectoration of blood. The physical examination of the chest gives distinct evidence of a cavity towards the apex of each lung. Besides these complaints his legs have been very œdematous since last Christmas, though he has, for many weeks, been passing an unusual quantity of pale limpid urine. The urine which he passes at present has a specific gravity only of 1006; it is very pale and clear, but contains no albumen.

This patient remained in the hospital about three weeks. He was treated for his dyspeptic sufferings, and also to relieve his cough; but as he did not seem to be a very fit subject for in-door treatment, he was discharged at the end of this period, without deriving any very decided benefit.

This is a rather obscure case; but though it is impossible to speak with certainty, yet it appears not improbable that, in addition to chronic phthisis and dyspepsia, there was also a granular degeneration of the kidneys. The only symptom directly referrible to these organs was the morbid state of the urine, which presented, however, little more than the characters of a simple hydruria. During the time that he remained in the hospital it contained no albumen: still, though the presence of albumen is a usual, it is far from being an invariable or essential symptom of a granular state of the kidneys; it is very frequently absent during the advanced stage of the disease in a chronic form, when the urine may merely present the characters described in the present instance. It is important, however, to observe, that a considerable anasarca coexisted with this inordinate discharge of fluid through the kidneys. Christison has had very extensive opportunities of observing the disease in question, and he gives it as his opinion that, except in the case of diabetes mellitus, dropsy never coexists with a continued discharge of urine in quantity considerably above the natural amount, except in cases of granular disease of the kidneys. Believing this opinion to be correct, it is on this circumstance more particularly that I found the opinion that this disease existed in the present instance.

The dyspeptic symptoms, from which he had long suffered, are very intelligible on this supposition, as chronic dyspepsia, in various forms, is a very frequent concomitant of this disease.

The only point of interest in this case is the continued absence of albumen from the urine of a person supposed to suffer from the peculiar degeneration of the kidneys at present under consideration; and the grounds for this diagnosis, viz. the continued discharge of an unnaturally large quantity of urine below the healthy specific gravity, in connection with a dropsical state of the cellular tissue.

The other case to which I have to refer presents the early history of a less doubtful

example of this disease, but which is unfortunately deficient of its termination.

Henry Yemm, admitted under Dr. Williams, July 23, 1841; a cabinet-maker, of rather short stature and stout make. He has always enjoyed good health till about three weeks before admission, when he got wet through, and remained some time in his wet clothes. Two days after this his face began to swell, and subsequently œdema of the legs, and ascites, made their appearance.

When admitted, the subcutaneous cellular tissue was almost universally œdematous, and there was distinct fluctuation of the abdomen. The urine was clear, but pale and rather scanty; it had a specific gravity of 1012, and was strongly albuminous. He had a dull aching in the loins, but was free from pain with this exception. The pulse regular, but of natural frequency, and small and wiry.

The treatment consisted in cupping over the loins, purgative doses of cream of tartar, and a diuretic mixture containing tincture of cantharides. The patient remained in the hospital three weeks, and was then discharged at his own request. At this time the dropsy was almost removed, and he felt better in his general health. The urine had acquired a specific gravity of 1020, but still contained albumen.

About a week after his departure the dropsy again returned; his health and strength fell off, and he suffered from much sickness. On the 7th of September he again applied for admission. The symptoms were much sickness, shortness of breath, some cough, and a general state of dropsy. The face, besides being bloated, was pale and anæmic. The urine was pale, of low specific gravity, and albuminous. He was again treated by cupping over the loins, hydragogues, and diuretics. He afterwards took creosote in doses of ℥ij., and used warm baths. Early in October he had much pain and tenderness in the abdomen, which was much distended with fluid: this was relieved by the application of leeches.

Very little relief was afforded on this occasion by any plan of treatment; the dropsy could not be removed, and the dyspnœa continued, with occasional sickness. The urine was generally of about natural quantity, but contained albumen, and was of a low specific gravity. He was discharged on the 3d of November, at his own request, the symptoms continuing very similar to those at the time of his admission.

The seven cases of albuminuria which have now been related occurred during the three months of May, June, and July, in the year 1841. The number is considerably above the average proportion of cases of this disease usually occurring in the medical wards of the hospital. It is uncertain whether this can be considered a mere accidental coincidence, or as depending on some atmospheric peculiarity, or other general circumstance. If the latter, a corresponding increase might likewise be expected in other hospitals in the metropolis during the same time. I am not aware whether this was the case. It is quite certain that in many of these instances the disease had existed in a less active state for a long period previously to their being admitted into the hospital; but this does not interfere with the possibility of some atmospheric influence, or other cause, exciting at this time a previously passive disease into fatal activity. Dr. Prout has particularly noticed the effects of malarious influence in altering the characters of the urine; and the same cause which would disorder the functions of a healthy organ may well be supposed capable of still further perverting those of one which is diseased. A cold moist atmosphere is fully recognised as having an injurious influence both in exciting and aggravating the symptoms of the granular degeneration of the kidneys; such, however, was not the character of the weather at this time, being generally fine and mild, and during the summer season. If any atmospheric influence operated in reference to these diseases, it must therefore have been of a more obscure, less cognizable character, than those peculiarities which constitute the states of the weather appreciable to our ordinary sensations.

Perhaps these cases, taken in connection, may be considered as affording some illustration to the views which Dr. Williams has for some years explained in the wards of University College Hospital, and has now embodied in his late work on the Principles of Medicine, as to the analogy which exists between various organic diseases affecting certain viscera, but not of a malignant nature. Tubercle in the lungs, cirrhosis of the liver, granular degeneration of the kidney, and opacity and thickening of the valves and membranes of the heart, are all regarded as the result of a deposit of lymph of a cacoplastic or imperfectly organizable character; such lymph shewing a strong tendency to induration and contraction subsequently to its deposition, the more marked as it is the further removed from the healthy standard.

Lymph of this imperfect nature may be deposited as the result simply of local causes, as we see in the contracted cicatrices resulting from extensive burns, and other serious injuries of the surface; but, as affecting internal organs, it usually depends on some imperfection of the system or constitution, analogous to that seen in persons of a scrofulous habit, and which may be either congenital, or developed in the individual *de*

novo. In such individuals it may be deposited in an organ either in consequence of inflammation, acute, or more usually of a low and chronic character; or, where the constitutional predisposition is strong, instead of the healthy lymph supplied for the ordinary textural nutrition of all parts, without any previous disease in the affected organ.

Resulting, then, from the same unhealthy state of the constitution, and differing in their symptoms and physical characters rather from the circumstances of the organ affected than in their essential nature, a very probable opinion might be formed, *à priori*, that the diseases already mentioned—and if there are others of an analogous nature—would be found, in many instances, more than one of them affecting the same individual. Almost each of the cases already related confirms the truth of this opinion. We have seen the granular disease of the kidney connected with tubercle of the lungs, and with a cirrhose state of the liver, one or both, in many instances; also, with diseased valves of the heart, and with tubercular deposit on the peritoneum. It is perhaps questionable how far softening of the brain, in any of its forms, can be included under the same category as the diseases already mentioned; it is, like them, an organic change, wanting the true characters of a malignant disease, but it presents none of the tendency to contract which, at one period or another, is common to the other diseases enumerated. This may, perhaps, merely depend on the great difference which exists between nervous matter and all the other textures of the body; the fatty matter of the blood, rather than the liquor sanguinis, being perhaps more particularly poured out for the nutrition of this tissue. Certainly softening of the brain is, like them, dependent on a degeneration of the healthy tissue, and probably of a constitutional origin. In two of the cases this disease coexisted with the degeneration of the kidney, which led to their introduction here.

As to the case of tubercle of the lungs, so with regard to the disease of the kidneys under consideration, it has been a matter of considerable discussion whether it be of an inflammatory nature or otherwise. That view which, with regard to the former disease, served both to explain the cause of the question, and to afford its solution, serves the same purpose with regard to the latter, namely, that being a disease which, from its nature, may depend either on constitutional causes merely, or on this as a predisposing cause, but excited by a local inflammatory action: both opinions seem to be true in different instances, and in support of both many cases may be brought forward. In some of the cases here related probably the disease may have had merely a constitutional origin; for no cause appears likely to produce an inflammatory action of the kidneys, nor can it be ascertained that the symptoms of such a state have at any time existed: the disease has slowly invaded, and only been discovered when so far advanced as to produce dropsy or other easily recognisable symptoms. In other instances, either an exposure to cold, or habits of intoxication—both causes likely to produce congestion or inflammation of internal organs—have preceded any of the symptoms of the disease; in these instances the disease has probably taken its origin in a congestive or inflammatory state of the kidneys. Certainly most cases which develope themselves suddenly as an acute disease may generally be traced to some such exciting cause; and in such cases the antiphlogistic treatment is that which is necessary, and is most successful.

An instance of this presented itself in a man under the care of Dr. Thomson, in the same hospital, but some time before the period when these cases occurred, where the disease was too far advanced to hope for cure, but where cupping over the loins had been tried on various occasions; and it was noticed that for a few days after each application of this remedy the amount of albumen in the urine was occasionally diminished, and the urea augmented. Here, probably, an inflammatory state of the kidneys coexisted with the albuminous degeneration.

The correct view of the nature of the disease seems to be, that it depends on a deposit of lymph of an imperfect character in the texture of the kidney, affecting particularly the cortical substance, but as the disease advances invading also the tubular structure. That where the constitution is very imperfect, this may depend on constitutional causes merely, in which case the bad lymph is deposited in the ordinary process of textural nutrition, but that in many cases this constitutional cause may be aided, and the disease excited, by an inflammatory state of the affected organ, in which case the bad lymph may be poured out not merely in connection with the nutritive process, but as an inflammatory effusion.

Allowing to the kidneys the property which Dr. Prout supposes them to possess, of exerting a disorganizing influence on the materials to be discharged by these organs, it appears sufficiently intelligible why, when the proper texture of the kidney is supplanted by a morbid deposit, these organs should lose this property, and pour out, as through a mere filter, the fluid part of the blood, retaining more or less of its albuminous character. It seems difficult to afford a probable explanation of the great diminu-

tion in the amount of the red globules in the blood, which seems essential to this disease. Whatever this may be, it is not unlikely that the great tendency to dropsical effusion depends on this state of the blood; as in chlorosis,—another disease in which there is a great diminution of the colouring matter of the blood,—there is a very similar tendency.

Little has been said on the subject of treatment; that was not the object with which these cases were reported. In a series of cases, most of which have proved necessarily fatal, and none derived permanent benefit, small opportunity is afforded for conclusions on this subject. I believe it is only in a very early stage that a cure can be accomplished; when at all advanced, though perhaps less rapid in its progress than pulmonary consumption usually proves, it has an equal certain tendency to a fatal result. When there are any symptoms of an inflammatory action, local antiphlogistic treatment will be required, and especially at an early period of the disease. In general I have found no remedy afford so much relief to the uneasy sensations of the patient as rather large purgative doses of cream of tartar, administered two or three times a week. In the cases (I believe not very numerous) where the disease gives a tendency to profuse diarrhœa, this treatment will not be suitable nor required. In addition to this, some diuretic remedy, especially the infusum diosmæ, combined with Spr. Æth. Nit. and Tr. Scillæ, affords temporary relief.

I am not aware that I have seen any benefit afforded by the Tr. Cantharidis; a remedy which has been supposed particularly applicable to these cases. Mild diaphoretic remedies are also beneficial. A careful attention to regimen and diet, and the administration of suitable remedies to remove any unfavourable symptom which may present itself, is a direction necessary in all cases. As to whether any of the preparations of iodine, which have been supposed beneficial in pulmonary consumption, by correcting the constitutional disorder with which that disease is connected, would be similarly beneficial here, I cannot give any decided opinion. The great tendency to anæmia or leucophlegmasia which exists, would seem to suggest the use of chalybeates, though without that expectation of permanent benefit from their use which we have in chlorosis, where there is no serious organic disease. This also is merely a suggestion, on which I cannot yet give the results of experience.

ON THE INJURIES TO HEALTH OCCASIONED BY BREATHING IMPURE AIR IN CLOSE APARTMENTS.

(For the London Medical Gazette.)

Notwithstanding the various inventions and improvements which distinguish the age we live in, it is lamentable to observe what little attention has been paid to the ventilation of apartments, in which we are destined to pass a greater portion of our lives, and in which a constant and well-regulated supply of the element we breathe is so essential to bodily health and mental enjoyment.

This inattention can only be accounted for either by an apprehension on the part of our architects and builders that the introduction of any thing new would expose them to the charge of a want of taste, or of that acquaintance with the style of the ancients to which it is the fashion so strictly to adhere; imitation being, in their opinions, more deserving of commendation than a desire to meet the improvements of the age; and fashion of more importance than health. If they construct our doors and windows in so superior a manner as to exclude every possible particle of air, they flatter themselves with having attained an advantage to which the inhabitants of ancient Greece and Rome did not aspire. They should, however, recollect that the ancient architects of warmer climates did not overlook the necessity of a free admission of air, and also that a constant supply and free circulation of this element is as necessary for sustaining life as a given quantity for the combustion of the fuel we require to warm our apartments: they nevertheless only provide for the latter, as if the former, although the more important, was of minor consideration, or that they conceived the chimney-draft sufficient for both purposes, when, in reality, it does not answer that for which it is principally intended—as by far the greater portion of the heat generated in our open fire-places is carried up the chimney by sharp currents of air from occasional openings of doors, or such crevices as it may force its way through, being, moreover, frequently productive of serious bodily injuries, while it cannot be sufficient for the purposes of wholesome ventilation: this air being colder than that already in the room is consequently of greater specific gravity, and must form a lower stratum, not unfrequently felt by those placed round the fire suffering from an undue proportion of heat at one side, and of cold at the other.

It should also be borne in mind that the openings of our fire-places being seldom more than three or four feet from the floor,

the upper stratum of air is neither removed or purified by this under current, and must, from being breathed over and over again, be productive of most prejudicial effects, and that this contamination of the atmosphere is considerably augmented at night by the combustion of lights, the quantity of air breathed by an ordinary-sized person being calculated to be about 2000 cubic feet per hour, and that two mould-candles consume as much of the oxygen of this air as a human being, the nitrogen and carbonic acid gas which remain being peculiarly inimical to animal life, and that when carried up by the currents occasioned by combustion and respiration, they must be repeatedly inspired in this upper stratum before they make their escape into the chimney—the only ventilating flue with which our houses are provided; that the heat thus generated is in proportion to the quantity of oxygen abstracted from the atmosphere, which enters into combination with the carburetted hydrogen of the flame of candles, coal, gas, oil, or other inflammable matter from which light is produced; that every cubic foot of carburetted hydrogen consumed unites, on an average, with two cubic feet of oxygen (that portion of the atmosphere required to support animal life); and that the product of this combustion is about two inches and a half of water and one of carbonic acid gas, which, when inhaled in its pure state, proves instantly fatal; and the greater the proportion we inhale in addition to the animal vapours evolved from the lungs and skin, the more pernicious the effect.

Supposing, for example, that the perfect lighting of an ordinary sized apartment requires fifteen cubic feet of carburetted hydrogen per hour, this would form about a pint and a half of water and fifteen cubic feet of carbonic acid gas, which are the products of the combustion, whether the carburetted hydrogen is obtained from wax, tallow, oil, or coal. If, therefore, the lighting continues in an unventilated apartment for seven hours, one gallon of water is produced, the greater part of which must be deposited on the walls, windows, furniture, polished metal, or other cold surfaces with which it comes in contact; and to some articles of this nature it is known to prove highly prejudicial, in addition to the injury to health occasioned by an increased quantity of moisture mixed with the air we breathe. As one of the principal functions performed by this air for the preservation of health is to carry off with it a considerable quantity of vapour, in order to prevent its undue accumulation on the lungs, it is therefore evident that after it has been already so loaded it cannot properly perform these functions, and that consumption and other complaints are thus frequently induced.

The prejudicial effects of carbonic acid gas (which is the same as the choke-damp of mines), as well as of the nitrogen of the air, which is set free by the abstraction of the oxygen (and amounts in quantity to four times that of the oxygen), are well known, and ought, by all possible means, to be provided against. This has been attended to within the last few years in some of our public hospitals, and the mortality in consequence considerably decreased; and likewise in several of our manufactories and public establishments, where the diseases generated by the number of persons congregated in such establishments have been proportionably diminished. In the House of Commons also, where hundreds of members, with hundreds of candles burning at night, tended so much to vitiate the atmosphere, important improvements, in lighting as well as ventilation, have been recently made; but in our domestic establishments little or no attention has been paid to this important subject; and the foundation of a variety of diseases must be the result, particularly from the foul air breathed at balls and other crowded assemblies. The confinement of air in our churches and places of public worship must also be highly prejudicial, as we are frequently exposed, on entering one of these edifices in the summer months, to an atmosphere ten or fifteen degrees below that of the external air, independent of the stagnant state in which it has been allowed to remain during a whole week, often vitiated in a greater degree by the gaseous matter evolved from human remains; and in private houses much inconvenience is thus experienced in close and gloomy weather, an evil which has been considerably augmented by close stoves when made of iron, and heated to a certain temperature. But if stoves were constructed of masonry throughout, as in many other countries, or of fire tiles, or porcelain plates imbedded in mortar, with well-regulated flues, they would be far preferable to open fire places, this substitution of imperfect conductors of heat being not only consistent with the principles of economy in the preservation of heat, and its more uniform distribution through apartments, but more salubrious than the methods usually resorted to in this country, of warming air by contact with iron stoves or pipes.

The healthy appearance of those who pass the greater part of their time in the open air sufficiently indicates its advantages. Armies are also well known to have far greater numbers of sick when well housed, than when exposed in a campaign to the vicissitudes of the season, for weeks and months without any other covering than the canopy of heaven, or occasionally of a tent, hut, or the shade of a tree. These facts ought to satisfy

its that we should admit the air as freely as possible into our apartments, at all seasons of the year, as the temporary and often imaginary inconvenience of a little cold, when compared with the decided disadvantages of breathing impure air, is by far the lesser evil.

When ventilation in large establishments or public buildings can only be obtained by artificial means, it is produced by pumping air in, and drawing it out by a fan worked by steam or other adequate power; and affording it the means of free circulation, either cooled, heated, or in its natural state, through well-regulated apertures in the floors, walls, or ceilings: and in coal mines by flues or shafts, in some of which constant ascending currents of air are maintained by the combustion of fuel, or coal gas, which produces descending currents in others at the same time.

The importance of this subject has been frequently pointed out by scientific men of considerable eminence, without attracting that attention which would have prevented many persons from being imperceptibly hurried to an untimely end. It is therefore to be hoped, that the powerful engine of the press will continue to lend its aid in exposing these evils, until it impresses upon the public mind, and more particularly upon our architects and builders, the urgent necessity of providing against them. Is it not possible by some simple contrivance to make the heat produced in the lighting of apartments, as in the House of Commons, available for their perfect ventilation? If any of these gentlemen succeed in the introduction of this system into private houses, they will be entitled to greater gratitude for this achievement towards the preservation of health and prolongation of life, than any claimed by those heroes whose victories have contributed so much to the miseries of the human race, and the destruction of the human species.

But we ought not, perhaps, to be so much surprised at the slow march of intellect in this respect, when we find so many centuries to have elapsed, before it was so generally admitted as at present, that pure water, another element bountifully supplied by nature, is preferable to any other beverage for insuring the health and happiness of mankind; and when we have so many temperance societies, and other advocates for impressing upon the minds of our fellow-subjects the necessity of becoming converts to the imbibing of this element in its pure state, ought we not with still greater reason to endeavour to make a similar impression, as to the advantages of inhaling with equal purity the lighter fluid, of which we stand so much in need, and which we so much more frequently require?

CONTRIBUTIONS TO THE PHYSIOLOGY OF THE HUMAN OVARY.

By Charles Ritchie, M.D. Glasgow.

(*For the Medical Gazette.*)

[Continued from p. 797.]

Part II.

Section II.—*Ovaries of women who died within one month after delivery at the full period.*

1. —— ——, a young woman, who died of peritonitis, &c. a few days after delivery. One ovary was larger than the other, and, on rubbing it between the fingers, a flat circular hardness, of about the size of a dried pea, was perceived, having its outer surface slightly umbilicated by the remains of a small triangular cicatrix. On dividing this tumor it was seen to consist of a contracted circular cyst, the walls of which were of a very faint yellow colour, and of an obscurely radiated or linear structure, bounded on their outer margin by what appeared like a distinct membrane, and, more externally, by an investment of stroma; while, internally, there was an opaque central point, of the size of a pin-head, having a puckered stellated look, as if from the shooting out of various prolongations among the folds of the yellow matter.

Second ovary pale, and destitute of vesicles, except at its distal extremity, where a number were clustered around an hypertrophied follicle, some projecting on the inner, and others on the outer surface of this bag, which was of the size of a grape.

2. M. C., married, and mother of a family. Death eleven days after parturition at full time. Both ovaries smaller than natural, and former cicatrices nearly faded. In one of the ovaries nothing was visible except a vesicle of the minutest size on the surface. In the other there was the same destitution of ovisacs; but the tubes and broad ligaments of both had several vesicles of a very delicate structure embedded in them; and in this ovary was one white body of small size, and also another body, which, when penetrated, gave issue to a little green fluid, and was found to consist of a thick, very white and shining

inner membrane, surrounded by a more delicate capsule, which was of a green colour, as if dyed by the effused fluid. After maceration for a couple of days in alum water, the dense white and glistening inner membrane could easily be insulated, when it appeared of the bulk of a pea, of the thickness of thick post paper, incapable of division into laminæ, and diaphanous, except here and there, where it was more obscure. The bed of ovary from which this body had been raised was now found to exhibit some traces of the greenish colour, and to consist of an internal pulpy and delicate lining, which had been in immediate apposition with the exterior of the removed body, and of another stronger membrane, from the outside of which irregular and imperfect laminæ of stroma could be separated. The pulpy appearance of the inner membrane seemed to be produced by the presence of minute sparse points of a more condensed tissue, like granular or cephaloid matter, deposited on its exterior.

3. ——— ———, 22 years of age. Death from acute pleuritis and empyema, three weeks after delivery of first child.

Ovaries large, plump, smooth, and pale, with the exception of three nearly faded old cicatrices on one, another having a foramen, and several black points from Graafian vesicles advancing to surface. On cutting through the centre of this foramen, a body of about the size of a large garden pea was observed, having a white pellicle in its centre, and its periphery covered by a similar investment, the body itself consisting of a ring of about an eighth of an inch in thickness, of a red, inclining at margins to a somewhat yellow colour, of an oblong shape, and not distinguishable from the other parts of the ovary, which were all of a very red colour, except by its defined shape and deeper dye, it being destitute of any fibrous or of any convoluted appearance, and being situated between the two pellicles mentioned, but not having, either in them or in itself, any stellated configuration.

Three minnte points in other ovary; one of a bright yellow, another white, with a small portion yellow, and the third a transparent pellicle enclosing a black point, apparently blood, decomposed and nearly absorbed. Numerous small Graafian vesicles in both ovaries, but no capillary-sized foramina from these bursting on the surface could be detected.

4. ——— ———. Died of phlebitis, three weeks after delivery at full time. Ovaries not affected by disease. Subject delicate.

External surface of both glands pretty copiously set with transparent eyes or points, some as small as the larger grains of sand, and others of the size of millets. Some had burst, leaving minute colourless pores in the peritoneal coat; in others the puncta were scarlet coloured, and had each a very delicate areola of the same hue; and in a third variety the blood in these areolar capillaries had been decomposed, and the parts had a sooty appearance, the discolourations being more or less annular, and having slender openings in their centres. In other respects the ovaries were smooth, the linear cicatrices of the menstruating period being nearly effaced. In each ovary was a cyst of the size of a swollen garden pea, consisting of an extremely white, dense, internal membrane, with polished, but fissured, inner and outer surfaces, arising from a degree of corrugation. This membrane was of the thickness of parchment, diaphanous, and had interposed between it and the substance of the gland, in both cases, two other delicate but distinct membranous layers, without there being a vestige of granular matter on either, or the possibility of raising any more laminæ from the ovary enveloping them, or of distinguishing any difference in the structure or degree of organization of the two. She had been delivered, under the superintendence of Dr. Pagan, the Professor of Midwifery in the University, of a single child.

5. Mrs. ———, aged 26. Had a child four weeks before death from chronic visceral disease. Placenta, a portion of which in a friable pulverulent state remained, had adhered to posterior part of right cornu. Both tubes glued to ovaries, which were small and corrugated. A comparatively recent cicatrix was seen in right ovary, corresponding to which, internally, was a circular ring of rose-coloured tissue, which became very florid on the access of air, and consisted of a fibrous structure, of about two lines in thickness, with a transverse oblique arrangement of its capillary-sized fibrils, something like

what obtains in the walls of the left ventricle of the heart. Within this body, but not adherent to it either by vessels or prolongations of itself, was an opaque, yellowish-coloured hollow membrane. A vesicle, similar to what is often seen in the broad ligament, was found, a little distance from the ovary, within the folds of this membrane, and adjacent to the portion of fallopian tube, the pavillon of which adhered to the ovary: this appeared in every respect like a Graafian vesicle which had passed from the ovary to its new situation by interstitial absorption; and, when laid on a piece of glass, cut into two, and examined by Dr. Rainy, Professor of Medical Jurisprudence in the University, with the microscope, it was found to contain a granular membrane and an ovulum.

SECTION III.—*Ovaries of women who died within, or at, two months after delivery at the natural period.*

1. ——— ———, aged 37 years, and mother of seven children, the youngest five weeks old. Uterus enlarged about a fourth; cavity large, and dyed with blood. Sinuses enlarged. Os uteri black, and epithelium abraded. Spermatic veins much varicosed, and occupied by laminated coagula arranged in spiral coils. Ovaries smaller than medium size, pale, and nearly smooth, particularly the *left*, which was also smaller, and which exhibited externally two small, raw-looking, and vascular, abraded spots of a minute size, as if occasioned by the rupture of small vesicles, which had risen above the surface of the peritoneal coat, and been discharged. Inner surface pale, with some very small Graafian vesicles in its parenchyma, but no rose-coloured, yellow, white, or black body.

Right ovary about medium size, with remains of four or five large-sized cicatrices, and the appearance of a number of miliary Graafian vesicles, many of them near and some within the inner surface of the peritoneum; while others had penetrated the entire thickness of this membrane, and remained either with a segment of the size of a small pin-head protruding externally, or had given way and been discharged, leaving puncta of a red colour. No vestige of any other form of ovarian body, except at one point, where there was an ill-defined corpus albidum.

2. ——— ———, died of suppuration in uterus, &c., six weeks after delivery of what was said to have been her first child. Ovaries unaffected by disease. On one there were two cicatrices, one very well marked, and the other less, and a minute red point, as if occasioned by the adjacency of a Graafian vesicle; and on the other there was an indentation or central hollow point, surrounded by an annular condensation of the ovary. On laying the latter open, an elliptical cavity, corresponding to the central dimple or depression, lined by a white, opaque, pellicle, and surrounded by a condensed, extremely white, and somewhat gristly oval ring, in the situation of the external hardness, came into view, and for a little was supposed by Mr. Allan Burns, who assisted in the dissection, and by me, to be the vesicle from which the fecundated ovum had been discharged.

On cutting through the centre of the principal cicatrix in the other ovary, however, a body was brought into view corresponding also, with a feeling, externally, of a tumor, of about the size and shape of a dried pea, having a central white opaque membrane or pellicle, not admitting of division into layers, or exhibiting any appearance, when examined with this view in the most careful manner, and in different ways, of being capable of such division, but being about the diameter of a mustard-seed, and having white streaks proceeding from it into the substance of a ring, about an eighth of an inch thick, of a pale brownish or slightly reddish colour, having an oblique linear arrangement of its fibre, and a structure, in respect to consistency and colour, resembling the reddish, horny, condensed cuticle which surrounds some clavi. External to this ring, which became redder, and more like to pale muscle, on exposure to the air, there was a distinctly circumscribed, white, delicate ring of capsular investment.

The differences between the body just described, and that contained in the other ovary, were the smaller size of the central cavity, the more organized state of the ring, the presence in this of red fibres, and its shining, horny, and yet muscular look, intersected on its inner margin by white striæ from the inner pellicle, and surrounded by a well-marked capsule of opaque membrane.

3. Mrs. C——, death eight weeks after accouchement of her third child.

One ovary.—A cicatrix, behind which was an elliptical body of about the size of a small pea, enveloped in a capsule, and presenting, when divided internally, a pulpy matter, which resembled in consistence the inner surface of the cephaloid cysts, only of a marked red colour from its great vascularity. Cavity obliterated. Six corrugated, hollow, white bodies in the two glands.

4. —— ——, aged 22. Death from suppuration in joints of pelvis, &c., eight weeks after birth of second child, the first being four years previous.

Right ovary larger than left. External surface marked with some nearly obliterated cicatrices, and the porous remains of some minute vesicles which had burst and been discharged. Subjacent to one of the nearly obliterated large cicatrices was an elliptical, slightly corrugated, and very white empty cyst, of about the size of a hemp-seed, the inner surface of which was of a shining pearly whiteness, destitute of any appreciable inner layer, and the whole thickness of its substance not more than that of thick paper.

In the *left ovary* were two bodies of a similar construction, but smaller and globular; they were whitish, empty, corrugated hollow cysts. In both ovaries there were a few small vesicles, filled with dark coagulated blood, but without any thickening of their coats. No other body of any kind.

5. —— ——, aged 37 years. Mother of four children, youngest of which two months old at death. Ovaries white, and although retaining the vestiges of numerous cicatrices, these were superficial and smooth from age. No appearance of Graafian vesicles either on surface or in texture of glands. One ovary contained a body of an elliptical form, and of about four lines in length, and nearly three in breadth, having a horny-looking, gray, semi-transparent, striated circumference, enclosing a minute, angular, or stellated, white-coloured central portion, or line. The striated marginal, or annular structure had much resemblance, in linear arrangement and fleshy colour, to the human nail as it rests on the subjacent pulp of the finger, and, when viewed by transmitted light, its tint was seen to depend on the presence of red vessels, and the striæ of its inner margin on the intersections of minute processes of the inner membrane. This latter, similarly examined, was translucent, and consisted of a distinct delicate membrane, forming a minute cavity. Two white bodies in ovaries, of a yellowish fatty look, with external convolutions.

SECTION IV.—*Ovaries in women dying from two to three months after delivery at the natural term.*

1. Mrs.——, aged 44 years. Youngest child ten weeks old.

On *one ovary* was a recent but thoroughly skinned cicatrix, and another which permitted a bristle to pass a very little way; and internally, there were various empty white cysts, from the size of a hemp-seed to that of a grain of mustard, two of which were connected with the recent scar and foramen. Gland two inches long by one broad.

Other ovary a third smaller. Remains of one large cicatrix. A minute vesicle and some punctuated abrasions of peritoneum on external surface, and, internally, some very small, but full Graafian vesicles. A number of white cartilaginous-like hollow bodies, all of small size, and one very little cyst with thin unchanged coats, but filled with clotted blood. No vestige of any other body.

2. Mrs. R——, aged 36. Death from typhus three months after birth of ninth child; being previous to fever in bad health. Ovaries of good size. *One* exhibited two small vesicles near to surface, and five cicatrices, old, and nearly filled up. On opening one of these, which was still raw, an empty Graafian vesicle was seen behind it, of nearly the size of a barley-corn, but without abnormal vascularity or thickening of its coats, or any clot.

Other ovary paler and smoother than the first, with two or three ecchymosed spots, as many faded scars, and one minute projecting vesicle; while, internally, the only things noticeable were some vesicles, and the imperfect remains of three white hollow globular bodies.

3. Mrs. M'——, aged 32. Eight children, youngest three months. Ovaries shewed traces of old cicatrices, and in *one* of them, on which were also seen some small vesicles, these scars were more deeply indented than in the *other*, in which there were only some distended vesicles, and an obscure appearance of two "white bodies;" while

in the first there was, 1st, in centre of gland, a thin vesicle, and without any seen connection with a scar, having its coats dyed with a snuff-coloured paste of disorganised blood, which still lay on it. 2d, a white body; and 3d, a solid, well defined, oval body, which consisted of an external ring of very vascular, fleshy looking substance, as red as muscle, and a central opaque line.

SECTION V.—*Ovaries in individuals dying four months after natural delivery.*

1. Mrs. M'——, 35 years of age. Mother of six children; second youngest six years of age; youngest at breast four months old. Surface of *one ovary* white and smooth, with exception of superficial remains of a cicatrix, and several transparent vesicles of a very minute kind. On cutting through the former, a solid body, somewhat larger than a hemp-seed, came into view, of a reniform shape, with an elliptical central portion of about the eighth of an inch in breadth, of a whitish, opaque colour. This, which seemed to be the corrugated remains of the inner layer, was bisected in its long axis by a more translucent line, formed apparently by lymph, which had agglutinated its inner sides, and obliterated what was left of its cavity, while its circumference had a serrated arrangement, occasioned by delicate processes of itself shooting into an annular, more external body, of a transparent, fibrous, and delicate muscular looking tissue, and of a faint reddish colour, which, in its turn, was invested with a capsule, from which red vessels penetrated to the annular portion.

Other ovary filled with unbroken vesicles, and contained also an empty follicle of the size of a pea, having its coats, which remained thin, painted internally with a thin coating of yellow matter supposed to be decomposed blood.

2. —— ——. Mother of two children; youngest sixteen weeks old. The *one* ovary exhibited one or two faint cicatrices, and the *other* the remains of a circular abrasion, of the size of a small segment of a dried pea, in which was a foramen leading into a cyst of the bulk of a garden-pea, which contained a clot of blood as large as a hemp-seed. The inner surface of this sac, consisted of a yellow pulp, of considerable thickness, which could be scraped off, leaving a vascular envelope, itself surrounded by a capsular investment, and which two unitedly, resembled one of the white bodies. There was a similar cyst, but only half the size, and empty of blood, in the opposite side of the gland, and the other ovary contained minute miliary ovisacs only, although these were abundant.

3. —— ——, a child sixteen weeks before death. Both ovaries white, and free from old linear scars, there being present only two or three recent minute pory solutions of the peritoneum, and on each gland a reddish or rose-coloured spot, and some hardness; corresponding to which there was, in the one ovary, a circular, solid mass as large nearly as a small dried pea, having a reddish colour, and a white, stellated, circular centre; and, in the other, an empty Graafian vesicle with thin coats and a yellow deposit on inner surface, and several melanotic spots, or corpora nigra.

4. —— ——, aged 37 years. Seven children; youngest four months old. Ovaries well developed.

One ovary. Peritoneal coat smooth, and presenting at several places vascular spots, each of the size of a pin-head, which were found to proceed from turgid Graafian vesicles escaped from the parenchyma, and lying with thin naked coats immediately under the surface, which was diaphanous. At two points of this kind the peritoneum was absorbed for about half the extent of the subjacent vesicle. Internally, the gland was very full of large vascular vesicles, and a circular hard body, moveable in the stroma, and of the size of a small pea, exhibiting when cut the whitish yellow, shining, cartilaginous tissue of the corrugated empty cysts, which I have called dense white bodies, was seen.

Other ovary presented two dark spots indicating subjacent unbroken Graafian vesicles moving to surface, and a third in which a minute portion of the hemisphere of a vesicle had already risen above the level of the peritoneal coat; also, a transverse groove across the free edge of the gland, arising from the protrusion of the half of a circular body of a cartilaginous appearance, being, when cut into, hollow, empty, of a vascular tissue, and of a dull whitish red colour; also, immediately adjacent to this was another circular, small, flat, hardness, which was connected with

the presence of an empty, hollow, very white body, which was not vascular.

5. —— ——, aged 24. Child four months old. Inner surface of cavity of uterus occupied by a highly injected vascular net-work, which was painted over with a thin layer of the white fluid of the tubes, which also were very vascular.

Right ovary exhibited two points, at each of which a minute segment of an unbroken, vascular, miliary sized Graafian vesicle was seen presenting through a foramen of the peritoneal coat; also, several small cicatrices and hardened points, under which, internally, were white bodies of the size of mustard seed.

Left ovary. Two very strongly marked, but old cicatraces, corresponding to one of which was a solid, shining, white body, and to the other, an ink-coloured thin vesicle, with its inner membrane gathered up into delicate rugæ.

ON

THE DOUBLE SALTS OF IRON.

(For the Medical Gazette.)

[Concluded from page 840.]

In Case 1, hydrated sesquioxide of iron was added to a boiling and concentrated solution of citric acid: it was observed to dissolve readily and in large quantity up to a certain point. A further addition left the solution turbid, apparently from excess of oxide. The mixture was now suffered to cool, was then filtered, evaporated to a treacly consistence, and dried in thin layers on well glazed earthenware: it separated in lamellæ of an acicular form and garnet colour, scarcely soluble in cold water, but more readily in hot. Fifty grains of this salt, dried at 212°, were examined as to the quantity of oxide contained; it yielded fourteen grains = 28 per cent. Another portion, prepared after the same manner, yielded fifteen grains = 30 per cent.

In Case 2, two several quantities of citric acid and hydrated sesquioxide of iron were kept at a temperature just sufficient to influence to combination until chemical action had ceased. The solutions were filtered, reduced, and dried, as in Case 1. The salts separated in lamellæ, but of a short and broad sort; these were in like manner submitted to examination, when there were found in one 22 grains of oxide, and in the other 25 grains of oxide, per cent.

In Case 3 I proceeded as in Case 1, until the whole of the oxide derived by precipitation from four parts and a half of commercial sesquioxide had been added to five parts and a half of crystallized citric acid, and gentle ebullition was continued for fifteen or twenty minutes. In appearance much of the oxide remained unchanged; but it was evidently in combination, for on the addition of an alkali it was totally and instantly dissolved. Owing to the variable quantity of real oxide existing in the article sold in the shops, this experiment will not be uniformly successful. From an experiment which will be detailed in a subsequent part of this paper, this combination of oxide of iron and citric acid will be inferred to be in the ratio of 80 to 140, or of one equivalent of oxide of iron to two equivalents of crystallized citric acid.

In case 4, tartaric acid was substituted for citric, and subjected to the same treatment as described in case 1. As soon as the solution appeared turbid one half was removed, filtered, and dried at 212°, when one hundred grains were found to be impregnated with twenty-six grains of sesquioxide of iron. I did not repeat this experiment. To the remaining half more oxide was added, and during the continuance of this part of the operation a bulky hydrated bitartrate of iron was thrown down, very nearly resembling hydrated sesquioxide of iron, but differing in being totally soluble in alkalies: this precipitate was well washed and dried at a gentle heat, which was raised towards the close of the process to 212°, and there kept until it ceased to lose in weight. One hundred grains were then heated to redness; it first evolved a suffocating inflammable vapour, then charred, and finally left me thirty-seven and a half grains of residue: the residue was dissolved in nitro-hydrochloric acid, precipitated with caustic ammonia, and washed. It was again heated to redness, when there were found to be thirty six grains nearly.*

* It is stated in Rose's Manual of Analytical Chemistry, that ammonia completely precipitates sesquioxide of iron from its solution in aqua

In case 5, acetic acid was digested at a common temperature with the hydrated oxide; union was readily effected; and by adding a little alcohol, and filtering, a beautiful solution was obtained, which after a lapse of months had only a very trifling deposit. A quantity of this solution was left to spontaneous evaporation in divided portions of say half an ounce each; the great bulk suffered decomposition in drying, and I only obtained from a pint of solution about one scruple in a perfect state, and about as much more in a slightly imperfect* condition. The perfect salt is in lamellæ of a ruby colour, and is soluble in water: ammonia precipitates oxide of iron from its solution, and the affinity between the oxide and acid is so trivial, that a little elevation of temperature is sufficient to overbalance it: in its dry state it will bear considerable heat without alteration: before examination I held it some minutes very near to a common fire. The twenty grains of *slightly* imperfect salt were made up to twenty-five, and heated to redness: after fifteen minutes it was found to weigh eight grains: the remainder was preserved, as I did not like to part with the very little that was with difficulty obtained.

It appears to me that the nature of the precipitate soluble in alkalies spoken of in cases 3 and 4, has been mistaken, and that they have been confounded with the oxide of iron itself. I some while ago met with an observation, but have failed to discover it since, to this effect—"the further addition of oxide (meaning addition after solution had ceased), causes the separation even of that portion which had been previously dissolved." A writer in the Pharmaceutical Journal, Vol. 1, p. 595, says, "let the oxide be added in excess." M. Beral also directs that "rather more oxide should be added than the acid will dissolve." Whatever may be the value of these remarks, or how much they may conflict with each other, it is not my present business to inquire; I refer to them, because individually, and together, they do seem to imply that the fact of the oxide combining after solution had ceased has been overlooked; and possibly to the prevalence of this oversight we may attribute much of the erroneous impression which so generally obtains. On a further comparison, I find that more of these results are not coincident with the opinions of some others: the writer in the Pharmaceutical Journal, to whose paper I have alluded, after a description of M. Beral's process, has the following—"The oxide of iron and citric acid combine in the proportion of forty parts of the oxide to seventy of the crystallized acid." The same is repeated by Dr. A. T. Thomson, in the last edition of his work on Materia Medica. I have repeatedly tried, without success, but with some uniformity as to result, to obtain a citrate of iron in scales so constituted; and as these proportions seem more fitly to apply to a compound of a different description, I would respectfully leave to these gentlemen to determine whether some error in computation may not have attended their investigations.

Regarding what has been stated in the preceding cases as matter of evidence, I see not how to escape from the conclusion, that in case 3, and latter part of case 4, we are presented with definite compounds of sesquioxide of iron with citric and tartaric acids: indeed, the constitution of the tartaric acid salts determined theoretically, and by experiment, agreed so very closely, as to leave little room for dispute, and with the citric acid salt it is not much more discordant. The combination of the oxide with acetic acid is also to be considered as definite; inasmuch as all acid uncombined must have escaped during the evaporation. The quantity of oxide in twenty-five grains of the dry salt held a few minutes before the fire was found to be nearly eight grains, but this estimate, owing to causes before mentioned, is a trifle too high: now, by a theoretical computation, a salt composed of four equivalents of acetic acid, and one equivalent of oxide of iron, should contain seven grains (rather more than less) of oxide in the same quantity; which, therefore, is probably the actual constitution of the article in question.

But it may fairly be doubted whether the products of the first and second operations have an equivalent constitution; the examination did not corroborate

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regia: an impression is now gaining ground that such a statement is inaccurate.

* The imperfection consisted in minute opaque dull spots, arising from disengagement of acetic acid, and deposition of oxide.

such an idea: nevertheless, both a tercitrate and quadricitrate may exist; and the latter supposition gains support from the probability of acetic acid combining in the same proportion.

Sesquioxide of iron is not precipitated from its combination with citric and tartaric acids, by alkalies, alkaloids, earthy and some metallic oxides: according to Professor Brande, malic, mucic, kinic, and pectic acids, lead to the same result. It has been found that double salts are formed, the precise constitution of which chemists are by no means agreed on: my own observations induce me to regard a binary series, the existence of which I will endeavour to demonstrate.

I took bicitrate of ammonia, and to its boiling solution added hydrated oxide of iron so long as a *greenish yellow* colour was retained, or so long as a distinct *red* absented itself: the solution must be boiled a few moments after each addition of oxide, or the effect will not be observed: when the process is complete we have a combination of one equivalent of bicitrate of iron with two equivalents of citrate of ammonia. I obtained from one specimen so made very nearly twenty-two grains of oxide per cent., and from another twenty-four grains: it dries in scales of a golden colour.

Again, I took the precipitated oxide derived from four parts and a half of commercial sesquioxide, and boiled it with five parts and a half of crystallized citric acid, and after continuing ebullition a short time it was supersaturated with caustic ammonia; it was then filtered, and cooled quickly, and I had a solution most difficult to evaporate without decomposition, but which, when dry, was perfectly soluble: one hundred grains of this salt afforded me nearly thirty-six grains of oxide of iron. I am sorry to say, another gentleman, to whom I gave a portion of this salt, only obtained thirty-four grains: pardon my attaching importance to this circumstance. It was my request that before examination notice should be taken that the salt was dry, for it is of so deliquescent a nature that by long keeping, or transferring from one bottle to another, it absorbs water. I was sorry therefore to find, by his note to me, that he had tried the salt in the state I sent it to him. It is true, he remarked, that the salt appeared quite dry, but there might have been water; and my impression is there was, and that his estimate is too low: under the circumstances, I think I am entitled to split the difference, and call it thirty-five.

I submit it to you whether I may not with reason infer that the real constitution of this salt is one equivalent of citrate of iron, and one equivalent of citrate of ammonia; that is,

Sesquioxide of Iron	80	or	37·56
Citric Acid . . .	116	,,	54·46
And Ammonia . .	17	,,	7·98
Equivalent . . .	213		100·00

What now forces itself upon the mind—what but the conviction that these two compounds are the representatives of two distinct series of chalybeate salts? I anticipate the objection that I do not show by analysis that my theory is exactly confirmed. It is true I come only very near the point, but I ask, let it be recollected that these salts are uncrystallizable; that on this account it is most difficult to keep the one series from interfering with the other; and this practical difficulty has been the cause, I think, of the uncertainty of opinion that is current amongst us. I shew two compounds, one containing very nearly one equivalent of oxide of iron united to one equivalent of acid, the other containing one equivalent of oxide of iron united to two equivalents of acid; they have peculiar external characters, and are arrived at by different means. I point out how this "not quite" is to be explained, and I do think that in forming my opinion I have followed closely in the track of inductive science: I determined to rest the preceding part of my argument on what, with all the correction I have bestowed on it, still remains weak and defective, because, trusting to my formula, I had given to several gentlemen samples of a salt which proved to be less perfect than I have made it at other times. This difficulty, which opposes itself to the establishment of a superseries among citric acid salts, will not be felt when I come to treat of the analogous compounds with tartaric acid. We have been long familiar with an example of the inferior series of tartaric acid salts in the officinal potassio-tartrate of iron; I therefore shall not now further occupy myself with them. The superseries is

made evident in the following manner. The bitartrate of iron resulting from the operation in case 4 is to be saturated with potash or ammonia; the solution is to be then filtered and carefully dried in small quantities at a time: I found ammoniacal salt to contain thirty-five grains of oxide: estimated theoretically, it is a fraction short of this quantity. Thus—

One equivalent of oxide of iron	80 or	34·93
Two equivalents of tartaric acid	132 or	57·64
One equivalent of ammonia	17 or	7·43
	229	100·00

To one or other of these two series, or to a mixture of both, the whole of the double iron salts, containing the sesquioxide, with which I am acquainted, are capable of being referred. The difficulty attending the manufacture of perfect salts of the superseries is such as to render it improbable that they can ever become extensively used. The ammonio-citrate of commerce contains an average of thirty per cent. of oxide; and in this state it is more permanent. A salt having this constitution is made without much trouble as follows*:—

Take a bisalt of any third constituent (bicitrate of ammonia, for example), made by adding a known quantity of citric acid to a similar quantity exactly neutralized with ammonia. This solution, in its turn, is to be saturated with hydrated oxide, which is accomplished by mixing the oxides gradually so long as it continues to be dissolved, avoiding any great excess. This formula admits of very general application by simply changing the acid or the third constituent, but there are exceptions.

Dr. A. T. Thomson observes on the ammoniacal citrate, that it disagrees with some constitutions more than its congener the potassio-tartrate. Guided by this opinion, I would direct attention to the compound of tartaric acid, iron, and potash, obtained by dissolving the hydrated bitartrate in a solution of the caustic alkali: if they be mixed in such proportion as to keep the bitartrate slightly in excess, supersaturating at the end with ammonia, a salt will be obtained perfectly but slowly soluble in cold water, substantially consisting of tartaric acid, iron, and potash, and belonging to the superseries of double salts. The admixture of ammonia is advised, first, because it is impossible to separate any excess of potash, should there be any; and, secondly, because it is difficult to effect complete combination without such excess.

In pursuing this investigation, the present nomenclature of the Pharmacopœia seemed incapable of comprehending the double series which opened itself to view; and on searching for a better, I soon found myself on ground which was occupied by contending parties. The unsettled point consisted in this: is the iron, or the third constituent, to become the adjective adjunct to the acid? In other words, is a compound of tartaric acid, oxide of iron, and potash, to be called potassio-tartrate of iron, or ferro-tartrate of potash? Many, whose names command the greatest respect, continue to make the third constituent express the quality of the acid; and these have custom for their stay. On the other hand, it is contended that this nomenclature conveys erroneous impressions of the constitution of the salt; and the argument is thus summed up by Dr. Pereira, in his Elements of Materia Medica. "The ferro-tartrate of potash is to be regarded as a double salt, in which

* The preparation of the hydrated oxide is an important point in the formation of these salts; the London College orders the sesquichloride to be decomposed with caustic potash; the Edinburgh directs the persulphate to be similarly treated with caustic ammonia. My own plan in detail differs from both of these. I make a solution of the sesquichloride according to the directions of the London College, adding nitric acid to insure the complete peroxidation of the iron, but instead of decomposing cold, diluted, and with a caustic alkali, I mix the solutions warm, somewhat concentrated, and use a carbonated alkali, and for these reasons: a moderate degree of heat is favourable to chemical action, and when conjointly with this double elective affinities are in operation, decomposition is more complete, *and the liability to form a basic salt is considerably diminished.* Again, if the solution is very weak, the precipitate will be of so buoyant a nature that the process of ablution will be tedious. As soon, however, as the oxide is precipitated, longer retention of heat is absolutely mischievous, and large quantities of cold water must be added without delay, and the washing continued until the supernatant liquor is tasteless: the remaining water being drained off, the oxide is ready. To this it has been objected, that carbonic acid has no affinity for sesquioxide of iron. I apprehend that affinity does exist, although ordinarily it does not influence to combination: how else shall we explain the fact, that solutions of sesquicarbonate of ammonia and bicarbonate of potash dissolve, under pressure of carbonic acid, sesquioxide of iron? That an affinity exists, I think is manifest; and that it prevents failure in making the hydrated oxide I am inclined to believe: at all events, I have not formed a basic salt since I have adopted the plan of decomposing with carbonate of ammonia.

tartrate of iron is the acid or electro-negative ingredient, and tartrate of potash the electro-positive or basic constituent. On this view we comprehend why ferro-cyanide of potassium and the alkalies refuse to act on it in the way they do on the ordinary ferruginous salts until an acid be added." But the author, in adopting a nomenclature, leaves the double *proto*salts unprovided for. If, then, the electric condition of these oxides is such that we are obliged to regard them in the light of acids rather than bases, it seems consistent that, with Berzelius, we should apply the usual termination of acids to them. Acting on this suggestion, the class of double-chalybeate salts would resolve itself into—

Ferr*ic* or *sesqui*oxide salts,
Ferr*oso*-Ferr*ic* or magnetic oxide salts,
And ferr*ous* or *proto*xide salts.

The ferric salts would be subdivided into true ferric, or such as have *one* equivalent of oxide united to *one* equivalent of acid; and diferric salts, or such as have *one* equivalent of oxide united to *two* equivalents of acid. The name of the one would then be ferrico-citrate of ammonia; of the other, diferrico-citrate of ammonia.

I now close my remarks on the combination of iron, to which I may return at no distant period, should it be admissible. I have endeavoured to assign reasons for opinions; but as the subject is one of great difficulty, I feel myself proportionably diffident. That I have established, to the satisfaction of others, what appears evident to myself, I dare scarcely hope; nevertheless I do hope that what I have said will lead the way to a satisfactory settlement of the question; and if I have accomplished this, I shall not unworthily have occupied a space in your journal.

I am, with respect,
Your obedient servant,
W. Hemingway.

London, March 22, 1844.

NOTES ON MENSTRUATION.

To the Editor of the Medical Gazette.

Sir,

If you consider the annexed "Notes on Menstruation" worth attention, you will perhaps do me the favour to insert them in an early number of your valuable journal.—I am, sir,

Your obedient servant,
John Warwick.

23, Hatton Garden,
March 11, 1844.

All the systematic treatises on physiology agree in describing the menstrual fluid "to consist of blood deprived of its fibrin; the fluid being composed of serum, in which red corpuscles are suspended."*

The opinion that fibrin is absent or deficient in the menstrual blood, has obtained universal currency during the last thirty years, upon the authority of MM. Brande† and Lavagna.‡

Previously to this period, it does not appear that any such opinion had been entertained. Mauriceau§ expressly states, that the menstrual blood "commonly differs in no way from that which continues in a woman's body." Haller‖ makes the same remark, and J. Hunter¶ terms menstruation "a natural evacuation of blood."

The fact that unaltered corpuscles are present in the menstrual fluid was known to J. Hunter, who remarks, "the red globules, however, are not dissolved, they retain their figure**." More recent observations confirm this. Dr. Donné having submitted to careful microscopic examination portions of the menstrual fluid obtained from two healthy females, found it to contain: 1, common blood globules of the proper character, and in great abundance; 2, mucus from the vagina, mixed with epithelial scales; 3, globules of mucus from the cervix uteri††."

Professor Schultz‡‡ examined a tea-

* Dr. Carpenter, Principles of Human Physiology, § 742; J. Müller, Elements of Physiology, by Baly, vol. ii. p. 1481; R. Wagner, Elements of Physiology, by Willis, Book i. Part 7, Note 7. Also, Blumenbach, Burdach, Velpeau, Majendie, Alison, Bostock, Elliotson, Mayo, &c.

† Philos. Trans. 1812, p. 113. A very meagre and unsatisfactory notice, in which, moreover, the absence of fibrin is not positively asserted.

‡ Esperienze soprá il sangue menstrue, noticed in Meckel's Archiv. 1818, Bd. iv. p. 151.

§ Traité des Maladies des Femmes Grosses, Descriptive Anatomy, Chap. x.

‖ Elemen. Phys. Lib. xxviii. Sect. iii. § 5. His words are "sanguis menstruus de sana, neque innuunda fœmina, rubore, calore, odoris, absentia nihil ab alterius fœminæ sanguine differt."

¶ On the Blood, Works by Palmer, Vol. iii. p. 114; also, Vol. i. p. 239.

** Ed. cit. Vol. iii. p. 85.

†† Vide Brierre de Boismont, "De la Menstruation." Paris, 1842, p. 174.

‡‡ "Verjüngung des Menschlichen Lebens," &c. Berlin, 1842.

spoonful of the fluid collected from a healthy female. He describes the vesicles as separating and sinking to the bottom of the fluid, where they formed what seemed "to the naked eye a cheese-like coagulum. Observed through the microscope, this apparent coagulum was found to be composed of perfect vesicles heaped together, yet isolated, and not adherent to each other, as easily happens to the vesicles in living arterial and venous blood*."

It is certain, then, that the menstrual fluid contains numerous perfectly natural blood corpuscles†. The foregoing statements, recording the retrospective results of chemical analysis and microscopic examination, are commonly found together, as in the paragraph above quoted. Nevertheless, with due deference to authority, it appears to me that these statements involve a contradiction in sense. The objection is, that we do not observe any secretive process, or process analogous to secretion, which could so act upon the blood as to strain the liquor sanguinis of its fibrin, and at the same time permit the free passage of its unchanged corpuscles.

Therefore, with the knowledge that the menstrual fluid contains the common blood corpuscles, we might conclude *à priori* that it would also contain a due proportion of fibrin.

Recent analyses of the fluid confirm this conclusion as truth. M. Bouchardat, upon analysing a portion collected in a state of purity by means of a speculum fitted around the cervix uteri, found it to be composed of the ordinary ingredients of the blood, arranged and combined in arterial proportions. This satisfactorily confirmed the previous observations made by Mr. Denis, from which he had concluded that the pure menstrual fluid was identical with arterial blood.‡ The researches of MM. Retzius and J. Müller,§ have also decided the presence of a full quantity of fibrin.

Furthermore, the catamenial discharge is commonly described as "being readily distinguishable from true blood by its want of power to clot;"* and this want of coagulation is regarded to result from the absence of fibrin, and is in turn cited as evidence of such being a fact.†

However, now that we are assured of the existence of fibrin in the menstrual fluid, we must look elsewhere to discover the reason of its non-coagulation. But firstly, does it always fail to coagulate?

There is good reason to believe that such is not always the case. M. Brierre de Boismont in describing the menstrual fluid observes, that "after some time it divides into serum and clot,"‡ and futhermore says, "the clots (in the menstrual blood) are incontestible, the coagulation not to be rejected; for the researches we have made on this point have shewn us in many cases the presence of clots."§ Moreover, coagula have been often found in the uterus of women dying during the menstrual period.‖

Yet, as a general rule, it is probably correct to say, that the menstrual fluid does not clot, and we have therefore to inquire by what circumstance the coagulation of the fibrin is prevented.

This, in the opinion of Hunter, was the loss of vitality. "There is," he says, "a natural action of the living body which destroys the life of the blood in the act of extravasation; this is the discharge of the menses in women:"¶ and again, he elsewhere describes menstruation as an action by which "the blood loses the principle of coagulation, and I suppose life;"** but he offers no explanation of the mode in which, as he imagined, the death of the blood takes place.

M. Retzius has attributed the non-coagulability of the menstrual fluid to the presence of the phosphoric and lactic acids, which he supposed to be developed in the uterine vessels.††

But M. Retzius is in error on this point, for the pure menstrual fluid is as alkaline as the rest of the blood, and

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* Brit. and For. Med. Rev. July 1843, p. 228.

† The observations of Burow, Gmelin, Dolivera, Toulmouche, Thénard, and others, having been made upon menstrual fluid altered in character by long retention in the uterus and vagina, cannot be accepted as descriptive of its natural composition.

‡ These analyses are given in full, with remarks, by M. B. de Boismont, op. cit. p. 172-3.

§ Journal für Geburtshülfe, de Siebold, Vol. 17.

* Carpenter, loc. cit.

† Elliotson, Palmer, &c.

‡ Op. cit. p. 171-2.

§ Ibid.

‖ See cases recorded by Mauriceau, Gendrin, Lee, Raciborski, and others.

¶ Principles of Surgery, ed. cit. Vol. i. p. 239.

** Idem, Vol. iii. p. 114.

†† Loc. cit.

acquires acidity by admixture with the secretions of the vagina, which have been found uniformly acid in healthy women.*

From the foregoing observations I am led to conclude, that the non-coagulation in general of the menstrual blood is owing, 1st, to an impaired vitality consequent upon the slow process of its elimination; and 2dly, to its mixture with the mucus of the vagina.

In support of which conclusions, I refer respectively to the observations of Professor Schultz, upon the indiscriminate deposition and want of cohesion of the corpuscles; and to the experiments of M. Mandl upon the effect of admixture with different secretions in retarding or preventing the coagulation of the blood.†

From its mingling with the mucus of the vagina the menstrual fluid acquires also the odour, dull colour, turbidness, viscidity, and other qualities, which have been commonly considered as indicative of its peculiar character.

It follows from the foregoing considerations:—

1st. That the pure menstrual fluid is ordinary blood.

And 2dly. That it is not a secretion, but simply a sanguineous exhalation;‡ in fact, a hæmorrhage which differs in no respect from an ordinary hæmorrhage.

I would therefore define the simple act of menstruation to be "a periodic constitutional hæmorrhage from the inner surface of the uterus."

The proximate cause of this hæmorrhage is an element common to all spontaneous hæmorrhages, namely, a local hyperæmia, or congested condition of the vessels of the part from which the blood is effused.

(The increased vascularity of the uterus during the menstrual period is sufficiently obvious after death. There is an indifferent representation of this in Dr. Hooper's Morb. Anat. of Uterus, plate I., fig. 2. The same condition is found during life. Mons. B. de Boismont describes the cervix uteri as hot, soft, and tumid to the touch, and the lips so swollen as nearly to obliterate the os tincæ. On examining with the speculum he found the vagina unusually vascular, the cervix uteri obviously enlarged, and having a bright red colour, very different from its usual pink or violet hue: from these appearances he considers the uterus to be in a state 'de gonflement, d'engorgement et de pléthore.'*)

Its ultimate cause, that is, the exciting cause of the congestion, is now proved, beyond all reasonable doubt, to be the periodical maturation and discharge of a Graafian vesicle or ovum from the ovary.†

These two conditions constitute the total of local actions upon which menstruation depends. Therefore, an in-

* Vide M. Brierre de Boismont, op. cit. p. 175.

† Journal L'Expérience, tom. ii. p. 245.

‡ "L'écoulement du sang menstruel est une véritable exhalation sanguine," B. de Boismont, op. cit. p. 185. Drs. Gendrin and Raciborski employ the term, "l'hémorrhagie menstruelle."

* Op. cit. p. 92.

† It is not my intention to enter into any discussion on this point. The following are the sources of information.

Cruickshank. Phil. Trans. 1797, p. 221.

Dr. John Power. Essays on the Female Economy, chap. i. On the Nature and Causes of Menstruation. London, 1821.

Home. Lect. Compar. Anat. Vol. iii. Lect. 10, On Generation, p. 296-7, 1823.

Dr. Robert Lee. Art. Ovaria; Cyc. Prac. Med. London, 1834. Med. Chir. Trans. Vol. 22, p. 338, June, 1839. Lectures on Midwifery, Lond. Med. Gaz. Vol. xxxi. p. 164, November, 1842.

Mr. Jones. Prac. Observ. Dis. of Women. London, 1839, p. 156, &c.

Dr. Robert Paterson. Obs. on the Corpora Lutea. Part i. Edin. Med. and Surg. Jour. Vol. 53, p. 62, January, 1840. Part ii. ib. Vol. 54, p. 394, October, 1840. Part iii. ib. Vol. 55, p. 432, April, 1841.

Dr. T. Laycock. On the Nervous Diseases of Women. London, 1840 (p. 43).

Mr. Girdwood. Lancet, March, 1843, p. 825.

Kerkring. Theod. Anthropogeniæ, Ichnographia. Op. Om. Anat. Leyden, 1717, p. 291.

Gendrin, Dr. A. N. Traité Philosophique de Médicine Pratique, tom. ii. pp. 15-35. Paris, 1839.

M. C. Négrier (Angers), Recherches Anatomiques et Physiologiques sur les Ovaires de l'éspèce humaine, considérés spécialement sous le rapport de leur influence dans la Menstruation, 8vo. fig. Paris, 1840.

M. F. A. Pouchet (Rouen), Théorie positive sur la fécondation des Mammifères, basée sur l'observation de toute la serie animale. Librairie Encyc. de Roret. Paris, 1842.

M. Duvernoy, (Strasbourg) Revue Zoologique, 1842, p. 394-5. Comptes Rendus, tom. 16, p. 141, July 24, 1843.

Prof. Bischoff. Entwickelungs geschichte der Sœugethiere und des Menschen. Leipzick, 1842. Traduit par Jourdan, Paris, 1843, p. 41-43. Comptes Rendus, tom. xvii. p. 121, July 17, 1843. L'Expérience, No. 337, Dec. 14, 1843.

Dr. A. Raciborski—Gaz. des Hôpitaux, No. 150, tom. iv. Dec. 17, 1842. Comptes Rendus, tom. xvii. p. 105 and 178, July 1843.

Journal l'Expérience, Nos. 317, 318, 323, 331, 332, 333, 334, 335, 337, from July 27 to Dec. 14, 1843, inclusive.—De la puberté et l'âge critique chez la Femme, au point de vue physiologique, hygiénique et médical; et de la Ponte périodique chez la Femme et les Mammifères. Paris, 1843. 1 vol. 8vo.

An excellent summary of the foregoing observations will be found in Mr. Paget's very valuable "Report on the Progress of Human Anatomy and Physiology in the Year 1842-3," p. 25. Brit. and For. Med. Rev. Jan. 1844.

quiry into the final nature of menstruation resolves itself into an examination of these two conditions.

This connection between the periodic congestion of the vessels of the uterus, and the maturation and discharge of a vesicle from the ovary, may be considered to obtain, either from the local proximity of these organs, or from their correspondence in function.

If we adopt the former view, and consider the congestion of the uterus to occur in consequence merely of its vascular communication with the ovary, we must then regard its congestion as an accidental condition. And here would terminate the inquiry.

If we adopt the latter view, and consider the congestion of the uterus to occur as an independent action, entered into for a particular purpose, and connected with the action of the ovary only by functional relation, it then remains for us to discover what this particular purpose is.

In answer to this inquiry, it may be advanced that the purport of the congestion is, in fact, the effusion of the menstrual blood.

But I must decline accepting this opinion, unless it should be accompanied by some rational explanation of the necessity or utility of the menstrual discharge as a distinct function. For it is at present difficult to explain what influence on the female system can result from the periodical evacuation of so small a quantity of blood in so gradual a manner. Neither can I consider the congestion of the uterus to result simply from its vascular connexion with the ovary. On the contrary, I am disposed to regard the periodic increase of vascularity in the uterus as an individual act of the organ, determined for a specific purpose—which purpose is the formation of the *membrana decidua*.

This explanation was first proposed by Dr. John Power, who defines the efficient cause of menstruation to be "an imperfect or disappointed action of the uterus in the formation of the decidual membrane*."

This opinion has hitherto remained unnoticed, but it certainly deserves attention; and I purpose, at an early opportunity, to consider the evidences upon which it rests.

* Essays on the Female Economy, Chap. I.—On the Nature and Causes of Menstruation, page 28.

ACCOUNT OF THE STRUCTURE OF THE CEREBELLUM.

To the Editor of the Medical Gazette.

Sir,

If you consider the accompanying paper to fulfil, in some degree, the object for which it has been written, perhaps you will allow it a place in your journal. It has no pretensions whatever to original discovery, but merely professes to remove some difficulties, and put in a more intelligible form the account which has been given by others. I am quite conscious that in appearing to differ from such high authorities as Professor Reid and Mr. Mayo, I must incur the charge of presumption, but as it is generally allowed that the account above alluded to is by no means easy of comprehension, I would willingly admit that I may have mistaken his meaning, though both to others and myself the obvious interpretation seems to be such as I have stated; at least, if the description which I have given be confirmed by others, it will, I think, be of service to the inquiring student, as many, I know, have found it difficult, if not impossible, to cross this "pons assinorum."

In conclusion, I may state that I have shewn my preparations to my respected teacher, Mr. Tatum, who allows me to say that he considers them to confirm the points I have attempted to prove. I must also acknowledge the kind assistance I have received from my friend and fellow-student, Mr. Henry Acland, to whom I was entirely indebted for the original idea of the structure.—I remain, sir,

Your obedient servant,

C. Handfield Jones,

M. B. Cantab.; Prosector at St. George's Hospital School.

P.S.—I need hardly mention that I shall be most happy to shew the preparations I have made to any one who may wish to see them.

The laminæ are the ultimate subdivisions of the folded surface of grey matter, which constitutes the exterior of the cerebellum; they are perfectly analogous to the convolutions of the cerebral hemispheres, and appear to consist of the same constituent parts. Since, then, on the exterior we have a

layer of cineritious substance, above 1-10th inch in thickness, (this is seen in a vertical section of any part to contain in its fold a central white line, which is evidently continuous with the white matter of the interior of the lobule to which it belongs), at the base of the lamina where the central white line joins the stem, a kind of enlargement, which marks the situation of the articulation, is observed to exist. We have now to inquire into the constitution of the central white streak. If, then, we take a lobule with several laminæ on one side, and endeavour to raise one, we find that it adheres to the one above, and that we must rupture the grey matter and a medullary plate beneath, before it will admit of being drawn downwards towards the base of the lobule: in the same manner, if we attempt to pass it upwards, we have to rupture a medullary plate before we can carry the fissure up the axis of the one above, *i. e.* nearer the apex. Here, then, it is evident we have a medullary *commissural* plate on each side, running from the middle lamina to the one above, and to the one also below: these exactly accord with Professor Reid's account, and with Mr. Mayo's figures. But besides these, if the medullary commissural plate connecting a lamina with the one above be broken through, the lamina may be pressed downwards towards the base of the lobule, carrying a medullary plate with it, as well as all the other laminæ which are nearer the base, with their medullary plates (*vide* Preparation I.), or if an interval be struck between the medullary plates of the stem of a lobule, and the fissure carried upwards, it will be found, unless taken in the axis of the lobule, to turn short off, and to enter a lamina (*vide* Preparation II.) Now these facts seem to shew, in the words of Reid, that "intermediately, between the external (commissural) plates, other medullary plates," derived, as I conceive, from the nucleus of the cerebellum itself through the stems of the lobules, "enter each lamina." At the centre of the base of the lamina we find an angular furrow, which receives a delicate ridge, situate on the medullary plate below: this disposition, to which the name of "articulation" has been given, will be better examined when we come to the lobules, being there much larger and more distinct. The lamina may be easily unfolded by continuing the separation up its axis from the furrow at the base. The next part for our consideration is the lobule, which simply consists of an aggregation of laminæ, placed somewhat in the manner of grapes upon a central stalk: this stalk or stem is chiefly made up of the medullary plates derived from the nucleus, which are proceeding to each lamina: near the base, however, of the lobule, external plates are found which may be traced reflected up the contiguous surface of the one adjoining (*vide* Preparation VI.): each lobule may be split up in its axis to the apex, or the fissure may be carried between the medullary plates, more to one side, when it will be found to enter a minor lobule or lamina (*vide* Preparation III.) We now come to describe particularly the "articulation," and this we shall do as it exists either in a lobe or lobule, for the lobules are not always articulated to the stem of a lobe, but, as in the case of the square lobe, directly on the nucleus. In a preparation before me (No. IV.), where the separation took place accidentally, the ridge is seen as a distinct rising, gently sloping on one side, but abrupt and concave on the other, which receives the under part of a minor lobule. From this ridge I can perceive no medullary plates ascending into the lobe which is seated upon it. The medullary stem seems to come principally from a part further back, *i. e.* nearer to the source from whence the medullary plates are derived. The furrow at the base of the lobe or lobule does not appear to be exactly in the centre, but considerably more to the *distal* side; hence the boundaries of this furrow would appear to be the central medullary plates which are derived from the nucleus, and are ascending into the laminæ on the *proximal** side, and the commissural external plates which are passing to the next lobule on the *distal* side. The fissure made by continuing the separation from the furrow will sometimes pass up to the apex of the lobule, sometimes turn aside into a lamina. The cause of this we shall presently consider.

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* "Proximal" refers to the side next to the point from which the medullary layers begin their course as they quit the nucleus, and is therefore *anterior* "Distal" being the opposite, and therefore more remote, or *posterior*.

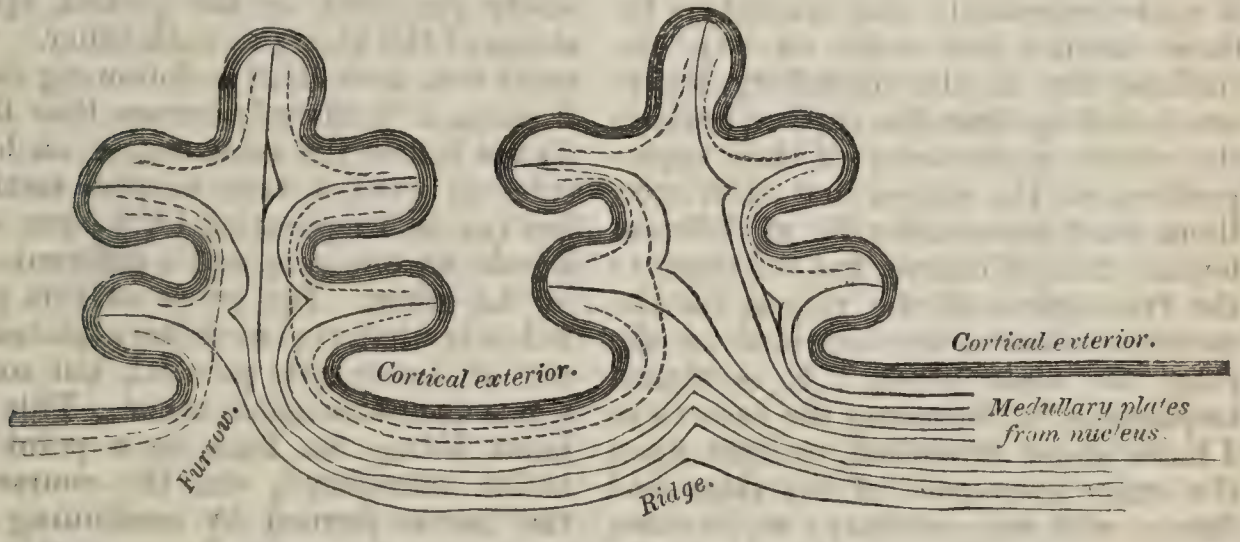
Let us now proceed to trace the course of the medullary layers which form the stem of the lobes. If one of these be broken off, which, we will suppose, bears a series of minor lobules on one surface, viz., the "proximal," and on the other several much smaller lobules and laminæ, as in preparation VI., and we then strike a fissure in the medullary stem at the base of the lobe near to its proximal side, we shall find that by using a little pressure we can make the fissure run on, and if taken at the proper level, enter the lobule situated nearest the base, which may then be split up; again, taking a deeper level, and carrying a second fissure upwards, it will enter and divide the stem of the next lobule, and so on: thus we may proceed to split up the whole medullary stem of the lobe into its several layers belonging to each lobule. From this, then, we may draw the general conclusion, that the lobules are furnished with their medullary stems in succession by the mere giving off of the layers which compose the primary stem. This observation seems to render it quite impossible that the ridges for these lobules can exist on any one surface; for as the medullary layers are peeled up from the surface towards the centre, in the order of their superposition, so the ridges that exist upon them must necessarily be at different levels: this, of course, has reference to the free apices of the ridges, for the medullary layers are indented in the ridge for some depth. It is almost impossible, in following the fissures as I have above described, to light upon the exact interspace of the ridge and furrow with any certainty; or, in other words, to open the "articulation." In one instance (No. VII.) where this had occurred, a fissure is seen extending up the lobule the second in order from the base of the lobe; while a second fissure having been taken a little deeper, exposes the ridge received into the furrow above, and the last medullary plate, proceeding as it seems to the last lamina on the distal side of the lobule. In this preparation is seen also the commissured plate, running to the lamina immediately beyond the lobule. From this, as well as from No. IV., it seems evident that no medullary plates enter a lobule from its *own* supporting ridge; they all appear to come from the one *preceding*. It may perhaps aid the mind to form a just notion of the ridge, if we conceive it to be the necessary result of the perfect apposition of the medullary plates, which, having run together for some distance, on arriving at the base of a certain lobule are about to separate; and while the upper stratum, destined for the laminæ of that lobule, mounts up into it, constituting the stem, the next beneath, as if reluctant to quit its former companion, passes up a short way, forming the ridge, and then passes on to its own lobule, the next in succession. Another preparation (VIII.) may further illustrate this subject. A lobule is split at two levels; the first fissure opens into a minor lobule near the apex; the second runs up into the apex itself, and in so doing crosses the ridge on which the minor lobule is placed, but deeper than in the preceding; so that the free apex of the ridge is not visible, which exists on that medullary plate which proceeds to the laminæ nearest the minor lobule. This seems further to confirm the above-mentioned idea, that the ridge is solely produced by the perfect apposition of the plates to each other. We must note here that, in following these fissures, it frequently occurs that they do not follow the same course on both sides of even a very narrow section, but (as in Preparation IX.) enter one lobule on one side, and a different one on the other. The cause of this probably is, that the medullary plates do not all lie exactly parallel, but sometimes decussate each other. This remark brings us back to a point we before mentioned, viz. the course of the fissure formed by continuing the separation from the furrow: this we stated seemed to vary; but in many instances it certainly runs up to the apex of the lobule: how then, it may be asked, are the laminæ of the distal side of the lobule to receive their medullary plates? This was a great difficulty for a long time; but I believe I have now completely made out that, in every such instance, medullary plates will be found passing across the fissure to enter the laminæ on the opposite side, though, from their great tenuity, they may, as they are broken across, easily escape observation. These decussating plates are seen in Preparation XII.

We now come, lastly, to examine the

course which the medullary plates take as they proceed from the central nucleus to enter the lobes. Now here I can only say that, in every attempt I have made, commencing the fissure at the semilunar notch, and carrying it backwards, the arrangement has appeared to be exactly analogous to what occurs in the medullary stem of a lobe; that is to say, successive divisions of the medullary nucleus pass off to enter each lobe in succession, and constitute its medullary stem, which is then further subdivided in the way we have seen. There is this peculiarity, however, that in the central nucleus the medullary plates decussate each other much more frequently, and seem as if they had not yet attained their regular order of superposition. From this it seems impossible that any "laminated stratum" can exist, as the "exterior shell of the nucleus," and the arrangement above described, is simple and intelligible, and consonant both with analogy and with all our received ideas of the structure of nervous centres. With respect to the "corpus ciliare," the plates seem to enclose and surround it, rather than run through it: it is probably a similar arrangement to the "olivary body" of the "medulla oblongata," and is similarly surrounded by fibres.

Finally, in reviewing this simple and beautiful structure, we cannot but be struck by its exact analogy to what we observe in the cerebrum: the convolutions of the hemispheres correspond to the laminæ, the superior longitudinal commissure, and the shorter ones from convolution to convolution, to the various commissural plates of laminæ and lobules; and the radiating fibres of the crura cerebri to the central medullary stems, which pass up from the nucleus, through its subdivisions, to terminate in the laminæ.

Diagram exhibiting two lobules, with their medullary layers from the primary stem of a lobe entering each lamina: the dotted lines indicate the commissural plates. This view is presented by a vertical section.



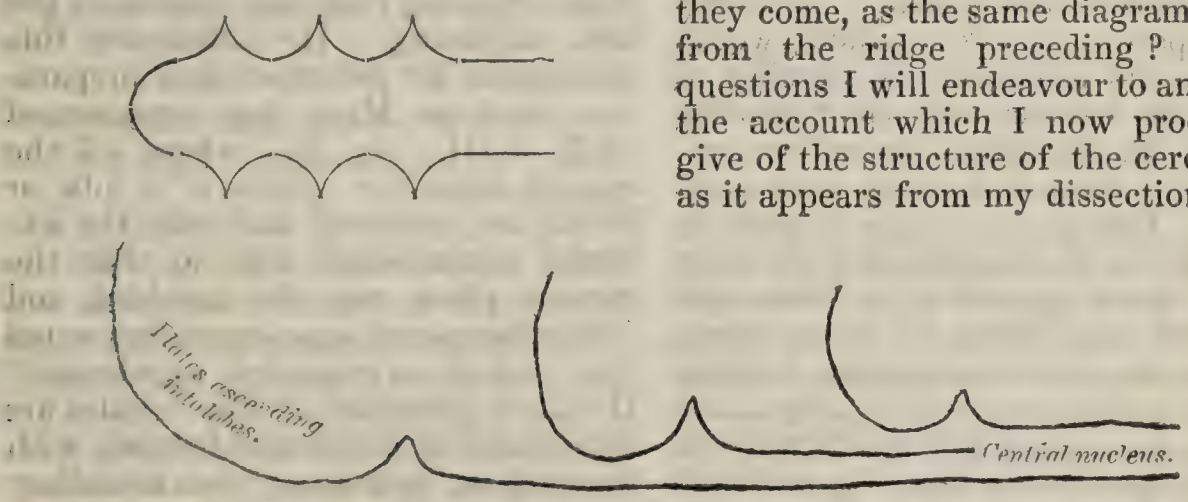
The elaborate description of the interior structure of the cerebellum, which Mr. Mayo has translated from the works of Professor Reid, must be well known to all who have given any attention to such inquiries; but though it has been published for more than twenty years, I have been unable to obtain, either from books or personal instruction, any explanation of several points in it which have always appeared to me exceedingly obscure. Indeed, an expression of Mr. Mayo's, "that the inquiry suggests to the mind many more doubts respecting the structure of the cerebellum than it will clear up," seems to go far to prove that even that celebrated and talented investigator had not completely satisfied his own mind upon the subject. This is further confirmed by the absence of any elucidation which physiology could supply. We see, in his description, that he evidently traces commissural plates, but he gives no such name to them; and if I have comprehended his meaning rightly, the disposition which he points out is entirely at variance with all our received notions of the continuity of nervous fibre from its peripheral extremity to the cineritious matter of its centre, whether that be a ganglion or any other collection of grey matter.

In the present attempt to throw some light on this difficult subject, I will

begin by considering Reid's account as translated by Mr. Mayo, and will endeavour, as far as I can, to state the views clearly which he seems to intend to convey: we shall then see what are the difficulties to be met, and shall be better able to judge if the succeeding account from my own dissections will tend to remove them. He commences by stating, "that the three peduncles on either side may be considered as formed by their union with two medullary columns, which are at first directed backward and outward: these enlarge into coarsely fasciculated masses, which contain near the middle of each hemisphere the ciliary bodies.... the central mass on either side is surrounded on either side by a *laminated stratum*, and in union with the latter constitutes the *medullary nucleus*." This last passage offers great difficulty, and we had better defer the consideration of it until we have examined the various compound parts of the organ. He then says, "the lobes, lobules, and their subdivisions, consist of medullary plates which are arranged one behind the other in succession, and are parallel to the outward furrows; the medullary plates consist of fibres, and tear easily in the direction of them:" this is all easily understood. We then come to a general account of the disposition observed wherever subdivision or branching occurs, as of the stem from the nucleus, or of branches from a stem:" and here he interposes a remark to which I would ask especial attention, as seeming to convey his real meaning, viz. "that the parts of the cerebellum are rather contiguous to than continuous with each other." This may, perhaps, be capable of a different construction, but the most evident sense appears to be this—that no direct continuity of fibre exists between the central medullary nucleus and the cineritious cortex of lamina and lobules, the lobules sitting as it were on a saddle upon their ridges. Upon this, if such be his meaning, and it seems further confirmed by Mayo's representation (Tab. VII., fig. 1,) I must venture to dissent, and will endeavour to show by preparations that such is not the case. In describing the "articulation," he says "that they are disposed in lines parallel to the course of the laminæ, and consist of a projecting ridge on one surface, and a corresponding furrow on that opposed to it: every lamina is naturally separable into two equal and lateral portions; at the centre of the base of each lamina is found an angular furrow which receives the ridge of the surface below." This I can quite confirm, but the next paragraph, in which he speaks "of that medullary plate upon which the ridges (more than one) exist for the articulation of the laminæ," and "of medullary plates extending from the ridge into the centre of the lamina," has always greatly perplexed me, and it does not correspond with what I think I have observed. In the remainder of his general description he recognizes the external (commissural) plates, skirting accurately the margin of each subdivision, reascending, and lining in succession those that are beyond, and the internal (nuclear) plates passing into the branches from the stems, and so on to the laminæ. This exactly accords with what we shall trace. He then proceeds to give a more particular account of each separate part, commencing with the laminæ: he describes external (commissural) plates reflected from one to another, and intermediate plates derived from the medulla of the branch itself, which enter each lamina. In the next paragraph (p. 80, Mayo's Commentaries), he most accurately describes the articulations of the lamina, and their superposed medullary layers, and afterwards fully shews how to trace the commissural plates running from one lamina to the next adjoining. He illustrates this description by reference to a preparation such as Mayo has represented (Tab. VIII., fig. 5), where all the *central* medullary plates of a lobe or lobule are removed, and only the external commissural left, so that the various plicæ may be unfolded, and "the arborescent appearance converted into that of an expanded membrane." He then proceeds: "The lobules are articulated by ridges and furrows with the nucleus," and states "that medullary plates enter the central furrows from the ridges which correspond with them:" this, as I before observed, I cannot confirm. Remarking upon the structure of the lobes, he says, "that plates composed of medullary fibres are laid in successive layers upon the nucleus;" not, as I conceive, originating from, and continuous with, the nucleus. To confirm this he adduces as an argument, that "there is no relation

between the volume of the hemispheres and that of the medullary columns." But this surely cannot be admitted; for the pons varolii, with its lateral continuations, the crura cerebelli, is well known not to exist in those animals, *as fishes*, which have no hemispheres, but only a median lobe for their cerebellum, and it regularly increases as they become more developed. Now the crura cerebelli are by far the largest of the three peduncles, and consequently have a main share in the formation of the medullary nucleus; so that we cannot consider that no relation exists between the size of the nucleus and its surrounding hemisphere: neither can I agree, on inspection of a vertical section of a hemisphere of the cerebellum, "that the medullary substance of the branches does not diminish in proportion to the minor branches given off from them. These statements, however, seem quite to coincide with the idea, that the parts of the cerebellum are *contiguous*, and not *continuous*.

We now return to the difficulty which presented itself to us at the outset, viz. to consider what is the nature of the structure to which he gives the name of "laminated stratum:" he says it is immediately within the lobes, supporting these processes on the one hand, and on the other it forms the "exterior shade" of the nucleus. Now from these expressions, without reference to anything else, I could not, I think, form any other conception than such as the annexed diagram conveys, where the dark line with its ridges represents the "laminated stratum" surrounding the central mass.



In a succeeding sentence he observes, "It would seem as if the component fibres run across each intermediate furrow, and meeting form each ridge, and mount together into the lobule:" thus the medullary fibres of the lobule would come from its *own* ridge, as Mayo shows (Tab. VIII., fig. 4,) which, I think, I can prove not to be the case; lastly, he concludes by describing the course which the fibres of these peduncles pursue as they pass through the nuclues.

From this review which I have attempted the reader will perceive that if I have comprehended the learned author's meaning aright, the chief points requiring further elucidation relate to the connection of the nucleus with the lobes and their subdivisions, and might be stated as follows:—

Do the ridges for the lobes, lobules, or laminæ, exist for each order of subdivision on any *one* surface, as Mayo shows (Tab. VIII., fig. 7,) or are they placed one behind the other, and on a deeper level, as this diagram would indicate? Again, do medullary plates enter each lamina, lobule, or lobe, from the ridge which corresponds to it, or do they come, as the same diagram shews, from the ridge preceding? These questions I will endeavour to answer in the account which I now proceed to give of the structure of the cerebellum as it appears from my dissections.

ADHESION OF THE PERICARDIUM.

To the Editor of the Medical Gazette.

Sir,

After perusing the second of the Gulstonian Lectures for 1844, by Dr. George Hilaro Barlow, published in a late number of your journal, I cannot refrain from expressing a conviction that, in his mode of delivering and recording a portion of the above discourse, that gentleman has failed in treating me with the courtesy and strict justice which are due from a scientific investigator towards every individual who faithfully labours in the same pursuits.

I beg leave to place before you briefly the grounds upon which I form this opinion.

In the 7th Vol. of the Guy's Hospital Reports, (page 421), I published a memoir wherein I sought to prove, and, I believe, succeeded in establishing, the fact, that adhesion of the pericardial surfaces, far from producing hypertrophy and dilatation of the heart (as maintained by Dr. Hope and many other writers upon the subject) has a tendency to be followed by general diminution in the size of that organ and its vessels, and contraction of its cavities; providing there has not also been superadded disease of the valvular passages of the heart, or continued obstruction to the pulmonary or systemic circulation. This argument was stated at considerable length, and supported by reference to cases and preparations. Upon the publication of the number which contained my essay, I was not a little surprised to find that Dr. Barlow (who is the medical editor of the work) had, in a paper "On Certain Diseases originating in Early Youth," inserted a few pages farther on (p. 488), advanced the identical proposition, relative to the pericardium, which I had sought to prove. I must confess that I felt somewhat chagrined at this, as the investigation which led to my conclusion was a long and laborious one, and as I believed that I was the first writer upon the subject who had arrived at the conclusion in question*. Still, as Dr. Barlow merely stated the fact in the form of a single axiom, occupying three or four lines of letterpress, and declined bringing forward confirmatory cases, with the observation that the subject had already been well illustrated by me in the same work, I thought proper to allow the affair to rest in that position. In his second Gulstonian Lecture, however, (Gazette, pp. 755-56), Dr. Barlow has again advanced the views, with regard to adhesion of the pericardium, to which I have alluded (that lecture being founded upon the above-cited paper, on the Diseases of Early Youth, in the Reports), and has there argued the point at discretion, and cited two cases as confirmatory of the reasoning adduced; and in doing so, he has clearly taken the task of maintaining the fact (as one not commonly recognised) altogether into his own hands, without making the slightest allusion to my researches, or acknowledging the part which I have taken in developing the doctrine which he is desirous to establish.

Now, sir, although I am perfectly well aware that a lecturer or essayist is not always required to mention the authority for every acknowledged principle which he adduces, I cannot but feel that, considering the very peculiar circumstances under which Dr. Barlow first advanced the pathological fact to which I refer, and taking into account the perfect acquaintance he must have had with my writings upon the subject —it having been his office to assist in correcting the proof-sheets of my paper before publication—he was imperatively bound, in delicacy and in justice, whenever he took upon himself the task of proving this question—which is still a novel one, and the proof of which has, I believe, hitherto rested with myself—to acknowledge, in a fair and ingenuous manner, my claims to the establishment of the fact. It is in consequence of Dr. Barlow having neglected to pursue such a line of conduct that I now take the liberty of addressing you.

I beg to state, in conclusion, that I have adopted this course, not from any litigious or vindictive feeling, but from a determination to maintain the justice of my claim to the credit of developing a fact the investigation of which cost me a lengthened period of very arduous application and research.

I am, sir,
Your obedient servant,
Norman Chevers, M.D.

Upper Stamford Street, March 14, 1844.

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* Dr. Copland (in the article *Heart*, Medical Dictionary, Part iii. p. 214) relates a case in which there appeared to be clear evidence that adhesion of the pericardial surfaces had been followed by atrophy of the heart. But the development of the principle under consideration cannot be attributed to that distinguished observer; as it is evident, from several clauses in the above-named article, that he considers adhesion of the pericardium to be one of the states which have a tendency to produce cardiac hypertrophy.

MEDICAL GAZETTE.

Friday, March 29, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

FEES AND PAYMENTS.

THERE will always be two modes of remuneration in such a profession as ours—by payment, and by a fee or gratuity. Payment will depend directly on demand and supply, and will always bear a pretty accurate proportion to the actual value of the commodity supplied, with a fair profit on the material and outlay. The idea of payment runs through every human transaction whatever. It is invested with no sort of dignity; but, on the contrary, the receipt of payment, hire, or wages, has rather the idea of humiliation attached to it. But, humiliating or not, like certain animal functions which we agree to perform without talking of them, it is quite universal, from the monarch of a free people to the lowest paid servant; it is a part of the right divine of kings, and of the right of the meanest subject. A fair day's wages for a fair day's work, as Mr. Carlyle truly observes, is a law of nature.

An ill bred subaltern who draws his pay with an air of importance, pays away the checque with a still fiercer aspect to the tradesman who humbly solicits the settlement of his little account; there is no other degradation or elevation in either case than what arises from the bad taste of the parties; and, were both well-bred men, neither would feel any. One of the affectations of the present day, not so harmless as might appear at first sight, is a desire on the part of general practitioners to substitute "small fees" for the old-fashioned medical *bill*. The real absurdity of a doctor's bill, as we shewed in a former article, is, that it is a charge made for one thing, to remunerate for another—a charge for drugs instead of for attendance. Remove this inconsistency, and the whole evil vanishes. If the receipt of payment be so serious an evil, let it happen as seldom as may be. Surely the giving a stamped receipt for ten pounds once a year is not a less dignified proceeding than the taking a crown-piece forty times. But this is one more of the absurdities to which a desire for change has given rise amongst the unthinking or discontented, and implies a total misconception of the nature and meaning of a fee.

A fee is supposed to be a gift conferred for a service rendered, without a previous bargain.

Its amount varies according to the estimation in which the giver holds the services or the person of the receiver. The notion of recovering fees by civil action is totally inconsistent with this idea, and is never entertained, that we know of, by lawyers. The recovery of *payment*, on the contrary, for work done or material supplied, is a matter of daily suit. It implies previous contract, tacit or specified.

One great social advantage possessed by our profession has been the remuneration of a large body of its members by fees only. Another advantage, of a different kind, has been, that the bulk of the profession has been able to insist on payment for service performed and materials supplied. This has enabled men to enter practice on terms of compliance with either of the two customs. The fact of payment does not exclude the idea of a fee or gratuity, which may be added according to the given estimation of the services or the person of the receiver; but a fee or gratuity does exclude the idea of payment. Physicians and pure surgeons should therefore be very cautious how they either break the

rule of receiving only fees for their services, which are thereby admitted to be of a special value, or of giving more attendance than the fee for such special service is intended to cover; and general practitioners should be careful not to depreciate the custom of giving fees, nor their customary amount, as such customary amount is an index to the esteem at which professional services are habitually rated by the public. Apothecaries have suffered much damage and degradation, at one end of the scale, by raising drugs in public estimation above their real value; let them take care not to commit a contrary fault, by depreciating the services of the physician, or lowering the amount of fees.

COLLEGE OF PHYSICIANS.

ELECTION OF PRESIDENT.

THE recent elevation of Dr. Paris to the office of President of the College of Physicians, which we announced last week, has brought upon us several inquiries as to the mode of election on these occasions.

It is thus:—There exists in the College of Physicians a body called the "Elects," amounting to seven, and who, in the present instance, consisted of Dr. A. Frampton, Dr. Lambe, Dr. Turner, Dr. Thomas Hume, Dr. Hue, Dr. John Bright, and Dr. Paris.

On the demise or resignation of the President, they, the said elects, choose from among themselves one to fill the vacant chair. None of the other members of the College are either eligible as candidates, or have any thing to do with the election.

COOPER PRIZE.

THE prize established by Sir Astley Cooper, which was this year to be given to the author of the best essay "on the Structure and Uses of the Thymus Gland," has been awarded to Mr. Simon, of King's College.

This is the first occasion on which Sir Astley's bequest has come into operation. The prize amounts to three hundred pounds.

THE MEDICAL PERIODICALS.

THERE has been, for some time back, a considerable stir among our weekly contemporaries. The circumstance chiefly deserving of attention has been the transition from what is usually understood by a "journal," to the shape and form of a newspaper—the wrapper being abandoned, and the whole printed on one large sheet, so that the advertisements constitute an integral part of the brochure. The ostensible advantage of this is, that by having the sheet stamped it admits of being transmitted by post.

If it be asked what *we* intend to do amid all this commotion, we answer that we are quite alive to all that is passing around us, and are determined to adopt any and every improvement which shall appear calculated to maintain the MEDICAL GAZETTE in the high position and extensive circulation it has so long enjoyed. From this it will be perceived that we have no intention of altering its present form or bearing. At one time, indeed, an edition of the GAZETTE was published in such shape as admitted of its being stamped and transmitted by post; but the facilities of communicating with all parts of the kingdom by railroads, and otherwise, were found to be so great, that scarcely anything was gained as to time by the medium of the post, and the plan was abandoned after a short but sufficient trial.

While, however, we decline to follow the example of our contemporaries, by reducing the GAZETTE from two sheets and a wrapper, to one sheet without

any cover, we beg to state that we have made various arrangements for improving its several departments — more especially by the publication of notes of various lectures, and by extending the departments allotted to analytic and foreign literature; together with various other changes which will be developed in our forthcoming volumes, and which we trust will prove satisfactory to our readers.

"MEDICAL PROTECTION ASSEMBLY."

A MEETING, which was numerously attended, was held at the Crown and Anchor, on the evening of Monday, the 25th, on which occasion the chair was taken by Mr. Ancell, and the business principally conducted by Messrs. Carpue, Ayres, Lynch, Wilson, and Wakley.

The chairman stated that a previous meeting had been held on the 20th of January, the objects of which were two-fold; first, in reference to the charter which had recently been granted to the College of Surgeons, and to the steps which had in consequence been taken by the Council of that body; and secondly, to consider the intention of the Secretary of State for the Home Department, to introduce a bill for the regulation of the medical profession. At the meeting alluded to an unanimous vote of censure had been passed, in regard to the provisions of the said charter, and a Committee appointed, which had convened the present meeting, to recommend the establishment of a society to be called the Medical Protection Assembly.

The secretary then read the report of the Committee, expressing their disapprobation of the new charter, and more especially denouncing the principle of excluding any class of members from the Council.

He was followed by Mr. Carpue, and several of the gentlemen above named. The principal points of objection urged against the charter were, that practitioners in midwifery were excluded from the Council; that the election into the governing body was limited to certain irresponsible parties; and that invidious and unnecessary distinctions were thus introduced among equals.

Mr. Wakley afterwards addressed the meeting, and professed his readiness to forward their objects in any way in his power.

Before the meeting broke up, the chairman stated that the subscriptions amounted to £100, including £25 from the Hon. Member for Finsbury.

SIMPSON'S NEW INSTRUMENT FOR CRUSHING LARGE CALCULI IN THE BLADDER.

Shewn at the Royal Medico-Chirurgical Society, on Tuesday, March 12, 1844.

HAVING been applied to a few weeks back, in a case where the stone was supposed to be too large to extract without first breaking it, and as the instruments that have hitherto been made for the purpose have proved useless, in consequence of the difficulty, or rather impossibility, of opening the blades of the forceps after their introduction into the bladder, so as to grasp and crush the stone, partly from the great thickness of the blades, and partly from their being fixed together; I have constructed the instrument described in the following lines, from which I consider it will be obvious that, as the blades are introduced separately, and the stone may be comparatively easily crushed, the important and so-long-desired object is at length attained, namely, of being enabled to break up a large stone, and extract it by fragments, without greater danger than that usually attending the ordinary operation of lithotomy.

This instrument, which is for the purpose of crushing calculi that are found to be too large to extract by the ordinary operation of lithotomy, consists of two strong, curved, flattish blades, rather more than three inches in length, which, together with the handles, make the whole length of the instrument

about fourteen inches. The blades are introduced into the bladder separately, so as to get round a large stone more easily. After the stone is seized between the blades, they are locked or connected together by means of a button joint, something similar to that of Rigby's midwifery forceps. After the blades are locked together, a flattish bar, with a male screw cut on the edges, is fixed, by means of a screw, to one side of the forceps, and passed through an opening made for it on the other. On this screw, and outside the handles of the forceps, a washer is first placed, and then the handle with the female screw is put on the bar; and, by turning it on the screw bar, the handles and blades are gradually closed together. Should the stone not be very hard, this power may be sufficient to crush it; but if not, a slide fits into an opening in the screw bar that serves to close the blades. This slide fixes by means of a screw in the centre, according to the width the blades may be opened, and a drill is passed through the hole in the slide (in which a screw is cut for the purpose), and also through a swivel which is fixed at the lower part of the forceps, almost under the joint. A blunt gorget may be passed into the bladder, to guide the drill, and prevent its touching any part of the wound. The handle of the drill is then turned round and round till it arrives at a stop placed on the drill, to prevent its passing beyond the ends of the blades of the forceps and injuring the bladder; thus boring away the centre of the stone, and consequently considerably weakening it. The blades may then be closed by turning the handle on the screw bar, and thus crush the stone to pieces. Should the first hole not weaken the stone sufficiently, the forceps can be opened, and the stone loosed from their grasp, and by moving the stone, and seizing it in a different position, another hole may be bored; but the probability is, that, in most cases, the one hole would be found quite sufficient. The stone having been broken into small pieces, they can then be extracted by the usual forceps or scoop in the ordinary way. The length of the incision in the bladder required to introduce and use these forceps is not more than that usually made for the ordinary operation in the average of lithotomy cases.

There is also another pair of forceps, of about the same length, but with straight blades, and made much stronger, to be used in the same manner as those already described, but so as to enable the operator to crush the stone without having recourse to the drill at all.

RESULTS OF OPERATIONS.

To the Editor of the Medical Gazette.

Sir,

On looking through the admirable Prize-Essay on the Formation, Constituents, and Extraction of Urinary Calculies, by Dr. Crosse, I noticed a passage which so strikingly bears upon the point insisted on by Mr. Phillips, in his judicious letter of last week, viz., the necessity of taking large numbers of operations in order to get at any thing like a correct rate of mortality, that I cannot resist the temptation to transcribe it for your readers. "Mr. Martineau's short paper on lithotomy, published in the Medico-Chirurgical Transactions, and dated January, 1821, contains a list of eighty-four patients operated on successfully, with only two exceptions. It is singular, and worthy to be noticed, that the next two patients publicly operated on by him, at the Norfolk and Norwich Hospital, both died; which is enough to abash the surgeon who should presume upon success according to his experience" (p. 155).

With the two additional fatal cases even, the success of Mr. Martineau, I believe, is unparalleled in the annals of surgery; but how different is the rate of mortality according as we include the 85th and 86th cases, or not. Including them, the deaths would be 1 in $21\frac{1}{2}$; not reckoning them, 1 in $21\frac{1}{2}$. So that it is clearly desirable, in statistical calculations, to have recourse to as large numbers as possible.

In prevalent severe epidemic diseases I have frequently noticed the desirableness of this. Several deaths may have occurred in rapid succession early in the epidemic period, so as to lead one to infer, without recourse to larger numbers, that the rate of mortality was high; but many severe cases may subsequently have occurred where the patients struggled through to recovery, the rate of mortality being thereby considerably reduced, and *vice versâ*.

The statistics of the medical profession are now claiming more general notice than they have hitherto done, and great utility is likely to be the result. By the by, as not entirely irrelevant to the subject of this note, can you inform your country readers if the Statistical Society has any connection with members of the medical profession; if there be a medical department of that Society? If so, it would be well for medical practitioners generally to be directed to a series of concise observations for statistical purposes. These could be made with little or no labour, and I for one should be most happy to take charge of any printed papers for being filled up, and adapted to subjects

within the range of general practice, which might be prepared by the Society.

I am, sir,
Your obedient servant,
T. H. B.

Bedford, March 20, 1844.

DOES DALBY'S CARMINATIVE CONTAIN OPIUM?

To the Editor of the Medical Gazette.

Sir,

The last number of the Medical Gazette contains a paper by Dr. John B. Beck, copied from the New York Journal of Medicine, "On the Effects of Opium on the Infant Subject." In this communication the author condemns the use of Dalby's Carminative as dangerous, from containing opium, and he quotes the opinion of Dr. John Clarke and others to the same effect. Now, in Dr. Paris's Pharmacologia, the following formula is given as the composition of Dalby's Carminative:—

Carbonate of Magnesia ℈ij.
Oil of Peppermint ♏j.
—— Nutmeg ♏ij.
—— Anise-seed ♏iij.
Tincture of Castor ♏xxx.
—— Assafœtida ♏xv.
Spirit of Pennyroyal ♏xv.
Compound Tincture of Cardamoms ♏xxx.
Peppermint Water fl℥ij.

I have never prescribed the nostrum sold as Dalby's Carminative, and of course cannot say any thing in its defence against the sentence of condemnation pronounced against it, as containing opium.

The experience of a series of years, however, enables me to recommend the composition above quoted from Dr. Paris's work, as a valuable and useful carminative for the griping and flatulence so frequently troublesome to infants in the first months after birth. Instead, however, of giving 30 or 40 drops, a dose which Dr. Beck mentions as being known to have proved fatal, I give from 3 to 5 minims only for a dose. In this proportion, combined with one grain of carbonate of magnesia, and the one-sixth or one quarter of a grain of rhubarb, and sweetened with syrup, it forms a pleasant carminative, an acid and aperient mixture, and may be given with safety and advantage. In some instances, where diarrhœa prevails, from two to five minims of Tinctura Camphoræ Composita may be advantageously combined with it, whether with or without the rhubarb and magnesia.

In conjunction with the cases of the dangerous powers of opiates and stimulants in young children, I may take the opportunity of mentioning the case of a little girl, two years of age, who fell suddenly into a heavy, almost apoplectic stupor, accompanied with vomiting, from the smell of Eau de Cologne, a bottle of which had been spilt by accident on the child's clothes. If you think this communication worthy a place in the Medical Gazette, your insertion of it will oblige your constant reader,—J. A.

March 13, 1844.

NEW TERMS IN ANATOMY.

To the Editor of the Medical Gazette.

Sir,

The difficulties of anatomy are so much increased by the confused state of its nomenclature, and the practice of inventing new words has grown to such a height, that I am anxious to protest, through the medium of your columns, against the introduction of a fresh batch of novelties with which we are threatened in a recent publication.

In the translation of Wagner's Physiology, which has just appeared, it is proposed to call the three grand divisions of the brain—*pro-cerebrum*, *meso-cerebrum*, and *post-cerebrum*. On referring to the German original, I find that these barbarous words are not used by Professor Wagner: they have been coined by his translator, as equivalent to "*voderhirn*," "*mittelhirn*," and "*hinterhirn*."

Fore-brain, *middle-brain*, and *hinder-brain*, is the plain English of these words; but Dr. Willis seems to be fond of Latin and Greek, and so makes his compounds by mixing up those languages in nearly equal proportions.

I trust, sir, you will interpose in behalf of us students, whose progress is already so grievously impeded by technical difficulties, and entreat all writers, whether of original works or of translations, to make use as much as possible of well-known and familiar expressions, and, if *new words* must be invented to describe *new things*, at least let some regard be paid to the structure of the languages employed.

If the different portions of the brain are to be arranged according to a Greek nomenclature, pro-encephalon, mesencephalon, and metencephalon might be tolerated; or if Latin be preferred, præ-medio, and post-cerebrum; but no rational defence can be made for Dr. Willis's words, which set all etymology at defiance, and are only fit to be classed with the "Patent Paravent," or Mr. Cabburn's "Anti-doloric oil."

I am, sir,
Your obedient servant,
A London Student.

March 21st, 1844.

ON THE

INFLUENCE OF OPIUM UPON THE CATAMENIAL FUNCTIONS.

By James McCune Smith, M.D.,
Of New York.

Pereira observes, "that we have little positive information as to the effects of opium on the reproductive organs of women. It is said that the catamenia, lochia, and secretions of milk, are unaffected by it;" whence he infers "that its use in the female is not likely to be attended with retention of the uterine or mammary functions."

The following cases, which have fallen under my notice within the last four years, give uniform evidence contrary to the above view.

Case I. E. L——d, a middle-sized, plethoric young woman, æt. 24. In 1837, having procured an abortion by means of some powerful drug, she sent for a physician, who gave opiates in the course of his subsequent treatment. From that time until April 1843, she resorted daily to laudanum, and gradually increased the dose to four ounces per diem. Her appearance last April was as follows: look, stupid; complexion, florid; person, fat; bowels, regular; and she ate very little food. Her catamenia, which had been regular until January, 1837, have never appeared since. I believe she is now in the Magdalen Asylum at Yorkville.

Case II. E. M——l, æt. 23, of middle size and sanguine temperament. About three and a half years ago, during an attack of acute rheumatism, laudanum was freely administered to her. During her recovery, and until March, 1843, she continued the daily use of the tincture of opium; and from 1841 to 1843 she drank from four to six ounces per day. In March last, she had clear complexion, ruddy cheeks, good general health, bowels regular, and ate little food; but from the date of her rheumatism, until March, 1843, her catamenia did not appear, notwithstanding she had been perfectly "regular" until that attack. She went into the country in April, 1843, where she could not obtain any laudanum; but she applied to a physician, who prescribed an emmenagogue, which was followed, at first, by a slight, and subsequently, by several profuse, but regular, returns of the catamenia. She has recently (July 20th) returned to this city, and has resumed a very moderate allowance of laudanum.

Case III. S. S——h, a short, fleshy, plethoric young woman (coloured), æt. 26. Until July, 1837, she had menstruated regularly; but, at that date, she commenced the daily use of laudanum, to allay the pain of *onychia maligna* of the great toe of the left foot. She continued drinking from two to four ounces of tr. opii, per diem, until June, 1842. During these five years, although her general health remained unimpaired, her catamenia did not appear. At the last-named date she was cured of the *onychia* by an operation. The succeeding month, and every month since, the menses have punctually appeared, without the aid of any medicine.

Case IV. R——n, æt. 25, of middle height, robust, sanguine temperament: has a child four years old. About two years ago, while confined to her room by a fracture of the left tibia, she commenced using opium to relieve pain and restlessness. She has sometimes used twenty or thirty grains o opium per day, for two or three months steadily; at other times, she quitted the stimulant entirely, for the same length of time. While she continued using the opium daily, her catamenia did not appear; but, on forsaking the drug for a month or two, she becomes "regular" without an emmenagogue. Her general health is good, and she has not been constipated at any time.

Case V. E. R——, æt. 18, a young, unmarried female (coloured), applied to me, in May or June, 1841, for relief from an increase of the quantity and frequency of the catamenia. She was pale, thin, and of the nervo-sanguine temperament. Pulse frequent, but soft; head dizzy. She has a sister and brother; both are married and have progeny. There were no coagula in her uterine discharges, and except physical weakness, her general health was good. Having tried the ordinary treatment without success, I gave her a combination of acetate of lead, camphor, and *opium*, in minute, frequently repeated, doses. I commenced the use of this combination on the fourth day of the persistence of the discharge, and continued the remedy until the discharge ceased. She was greatly relieved by this practice. Shortly afterwards, on leaving the city, she procured a copy of the prescription; and, without my knowledge, continued using the pills (as her sister informed me lately) nearly a year. The catamenia gradually diminished, and, at the end of a year, entirely ceased. She was subsequently (Sept. 1842) married. Her general health remains good, her person is thin; but menstruation has not recurred, nor has she yet become pregnant. Since abstaining from the pills (Aug. 1842), she has repeatedly resorted to emmenagogues, prescribed by various physicians, but without success.

Remarks.—The first four of the above females are courtezans. But their vocation cannot have been the cause of the arrest of their menses; for I can say, from a somewhat extensive experience in the Lock Hospital at Glasgow, that this unfortunate class

have no peculiar liability to suppressio mensium. E. M——l (Case II.) informed me that she was acquainted with several opium-eaters, in all of whom the menses have been arrested, as they believe, by opium.

Without assuming from so few cases that the daily use of opium will *always* arrest the catamenia, I submit them, in the hope that they may attract the attention of medical men to whatever facts may be within their reach. It will be interesting to ascertain, in relation to married women, who have borne children previous to a resort to opium-eating, whether this habit arrests their catamenia, and their capacity for conception; or, whether it arrests the one and not the other. It may also be worth the inquiry, whether opium, in skillfully regulated doses, may not be used as a means to bear women safely through the critical disturbances which occur at the "change of life."

One circumstance is common to all the above narrated cases, viz., the arrest of the catamenia was not followed by the vital disturbances which attend suppression from other causes; or, in general terms, opium, in daily doses, arrested uterine periodicity without disturbing other ordinary vital functions. Here we have an analogy with other well-known effects of opium; for this drug, to a great degree, arrests hunger, which, in the present state of civilized society, is a *periodic habit*, for it is seldom allowed to become an actual *want*. In a therapeutical point of view, opium exerts an almost uniform influence as an arrester of periodicity. As a narcotic, its influence is not uniform, for it does not always produce sleep; and I am inclined to the belief, that when sleep does follow its exhibition, it is rather a consequence of the absence of (an arrested paroxysm, than of a direct narcotic influence.—*New-York Journal of Medicine.*

EFFECTS OF A LARGE DOSE OF ARSENIC TAKEN BY A LUNATIC.

By A. B. Shipman, M.D. Cortlandville, N.Y.

In the year 1838, a gentleman who had been insane two or three years, the cause of which was probably ill health from disorder of the digestive organs, acting upon a nervous temperament, took a teaspoonful of the white oxide of arsenic with a view of destroying himself. It was taken immediately after eating a hearty dinner, and washed down with a draught of water. Soon after, or within half an hour, he vomited freely, and in the course of the day a diarrhœa set in, which followed him a day or two. He then informed his medical attendant of what he had taken, and his regret and contrition at the act. All this time he experienced but little of what could be attributed to the poison; the diarrhœa was not attended with any thing peculiar, he had eaten his usual meals with a tolerable relish, and complained of no unusual burning or pain in the stomach and bowels. Within a week or so he was taken with severe pain in his legs and arms, which he described as most excruciating; the sensation he compared to the gnawing of rats, or the boring of a gimlet into the bones: there was some swelling of the legs and feet, but no preternatural heat. After the pain had continued some days, a partial paralysis of the limbs was observed. He took various medicines, mostly of the anodyne class, with stimulating liniments and frictions, which were persevered in for a length of time. The paralysis, however, remained obstinate for months. The strychnine was finally given, and continued several weeks. The paralysis gradually left him, and he regained his health, and resumed his business as a merchant. But what was most curious to the physician, and to the patient of the most importance, was the complete restoration of his reason, and ultimately his health. Previous to his insanity he was of a reserved and cautious disposition,—was taciturn, diffident, and exemplary in his conduct,—was on the point of contracting an eligible engagement,—his pecuniary circumstances were unembarrassed. Yet all at once he became talkative, boisterous, and mirthful. Entered into speculations, contracted for farms and property which he did not want, supposed himself in possession of immense sums of money, and that his speculations would conduct him to boundless wealth. He insisted upon his marriage immediately—invited every body he saw to attend his wedding. His marriage finally took place, as his friends imagined it might be a means of restoring him, or an exasperation of his malady a result of his wishes being thwarted. But these palmy days of ideal wealth and splendour soon wore away, and he sank down a gloomy, desponding, and dejected lunatic, unfit for business or society. He was however harmless, and lived with his wife for two or three years, attending to no business. He was in this state when he took what he imagined would be his last dose, but which in all probability was the means of restoring him to reason. Since that period, there has been no signs of insanity, and his health has been good since the removal of the paralysis from his limbs. He has resumed his business as a merchant, and conducts it judiciously and with success.—*American Journal of the Medical Sciences.*

ON THE THREE IMAGES REFLECTED IN THE EYE.

M. Magne lately addressed a note to the Academy of Sciences, relative to the three images reflected in the eye by the light of a taper.

The late Professor Sanson began to observe in 1836, and pointed out to his clinical class in 1837, that when a candle is placed before the eye of an amaurotic patient, whose pupil is dilated, three images of the flame can always be distinguished succeeding one another from before backwards. The first, or anterior one, which is the brightest, is erect; the second, or middle one, which is less bright, is reversed; and the third, or posterior one, is much fainter than the other two, and is erect, like the first one. M. Sanson and his pupils arrived at the same results, and ascertained that the anterior erect image is produced by the cornea; that the middle reversed one is owing to the posterior segment of the crystalline capsule; while the posterior erect image arises from the anterior segment of the same capsule. Opacity of the cornea destroys all three images. Opacity of the anterior capsule destroys the two posterior images. Opacity of the posterior capsule prevents the production of the reversed image.

In other words, when there is a posterior capsular cataract, we cannot see the middle or reversed image; in anterior capsular cataract, the anterior erect image is alone visible; and so it is in capsulo-lenticular cataract. The experiments of M. Pasquet, combined with these, have confirmed the conclusion that a cataract, even at its commencement, can always be distinguished from amaurosis and glaucoma. For since in glaucoma and amaurosis the alteration does not affect the crystalline apparatus, the three images of the flame still remain.—*Gazette Médicale*, Jan 27, 1844.

MEDICAL RELIEF FOR THE POOR.

A select Committee of the House of Commons for inquiring into the present system of administering medical relief to the poor, under the Poor-Law Amendment Act, is now sitting. They have imperatively prohibited the publication of any thing that passes until their report shall have been presented.

EFFECTS OF DRAINAGE ON HUMAN LIFE.

The Rev. Professor Buckland, at a public meeting held in Oxford last week, said that, in the parish of St. Margaret, Leicester, containing 22,000 inhabitants, it appeared that one portion of it was effectually drained, some parts but partially so, and others not at all. In the latter the average duration of life is thirteen years and a half, while in the same parish, where the drainage is only partial, the average is twenty-two years and a half, thereby shewing the frightful effects of a bad atmosphere.—*Times*.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

Thursday, March 21, 1844.

J. P. F. P. Hains, Dartmouth.—S. S. Smith, Munslow's Aston, Shropshire.—P. Grubb, Plymouth.—J. B. Leeson, Leicester.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Shewing the number of deaths from all causes registered in the week ending Saturday, March 16, 1844.

Dropsy, Cancer, and other Diseases of Uncertain Seat	82
Diseases of the Brain, Nerves, and Senses	175
Diseases of the Lungs and other Organs of Respiration	307
Diseases of the Heart and Blood-vessels	30
Diseases of the Stomach, Liver, and other Organs of Digestion	66
Diseases of the Kidneys, &c.	12
Childbed	9
Paramenia	0
Ovarian Dropsy	3
Disease of Uterus, &c.	6
Arthritis	0
Rheumatism	0
Diseases of Joints, &c.	3
Carbuncle	0
Phlegmon	0
Ulcer	2
Fistula	1
Diseases of Skin, &c.	0
Old Age or Natural Decay	82
Deaths by Violence, Privation, or Intemperance	32
Small Pox	21
Measles	21
Scarlatina	43
Hooping Cough	32
Croup	9
Thrush	4
Diarrhœa	3
Dysentery	3
Cholera	0
Influenza	3
Ague	2
Remittent Fever	0
Typhus	28
Erysipelas	6
Syphilis	2
Hydrophobia	0
Causes not specified	2
Deaths from all Causes	1030

Wilson & Ogilvy, 57, Skinner Street, London.

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